

A M A T E U R R A D I O

JUNE 1962



Vol. 36, No. 6



2¢

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"AMATEUR RADIO"

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VK3WI: Sundays, 0900 SAT. on 7146 Kc. Relays on 3.7, 14.2, 50.03, 144 and 288 Mc. Intrastate hook-ups taken on 7135 Kc.

VK6WI: Sundays at 0830 hours WAST, on 7146 Kc. Intrastate hook-ups taken on 7146 Kc.

VK7WI: Sundays at 1000 hours EST, on 7146 Kc. and 3573 Kc. Intrastate hook-ups taken on 7115 Kc.

★

OUR COVER

At the Federal Convention in Perth, much work had to be done by the delegates. Our cover shows the meeting in action. Fuller details are given on page 11.

FEDERAL COMMENT

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AMATEUR FREQUENCY ALLOCATIONS

Another significant chapter in the history of Amateur Radio has closed with the official notification by the P.M.G. Department of the new frequency table which becomes effective from and inclusive of July 1, 1962. It seems almost incredible that three years have elapsed in reaching this finality, years in which the Institute has "grown up" in stature and experience to become a forceful factor at the conference table of the R.F.A.R.C.

The following is the official statement of the authorised frequency bands and types of emission available for use by Amateur Radio station licensees as from 1st July, 1962:—

Medium Frequency Band (Kc/s.):

1800-1860.⁽¹⁾

High Frequency Bands (Mc/s.):

3.50-3.70, 7.00-7.10, 7.10-7.15,⁽¹⁾ 14.00-14.35, 21.00-21.45, 26.96-27.25,⁽³⁾ 28.00-29.70.

Very High Frequency Bands (Mc/s.):

52-54, 144-145, 288-296.⁽³⁾

Ultra High Frequency Bands (Mc/s.):

420-450,^(1,3) 576-585,⁽⁴⁾ 1,215-1,300,⁽¹⁾ 2,300-2,450.⁽¹⁾

Super High Frequency Bands (Mc/s.):

3,300-3,500,⁽¹⁾ 5,650-5850,⁽¹⁾ 10,000-10,500,⁽¹⁾ 21,000-22,000.

- Notes (1) The Amateur Service is the Secondary Service in this band.
(2) This band is not available for the Amateur Service after 1st July, 1963.
(3) This band is available for the Amateur Service as from 1st January, 1964.
(4) This band allocated on a temporary basis until required by the Broadcasting Service.
(5) This band is designated for Industrial, Scientific and Medical purposes. Radio communication services operating within the band must accept any harmful interference that may be experienced from the operation of industrial, scientific or medical equipment.

Types of Emission Authorised—

All bands A1, A3, A3a, A3b, and F3 (± 3 Kc/s.).
All bands above 52 Mc/s. A2, F2, F3.
All bands above 144 Mc/s. A0, F0, P0.
Ultra High and Super High Frequency Bands, and 288-296 Mc/s. until 1/7/63 A5, P1, P2d, P2e, P2f, P3d, P3e, P3f.

The P.M.G. Department intends to replace all existing Amateur Station Licences with new documents which will incorporate the information already stated. These will be issued prior to July 1, 1962.

The changes are not all frequency-wise. Federal Council believes it has achieved two points vital to the future of Amateur Radio in this country—the acceptance of our representative at further conferences and the status accorded in our new designation, namely "The Amateur Service".

FEDERAL EXECUTIVE, W.I.A.

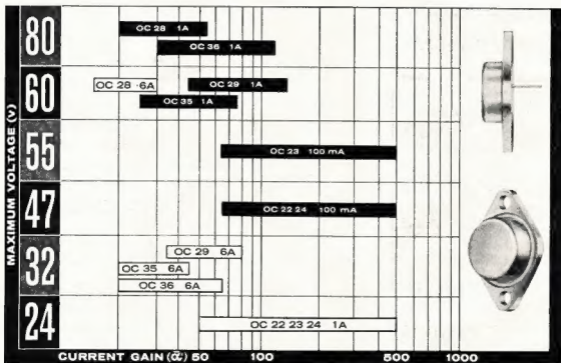
CONTENTS

Station Test Equipment: The Modemeter	3	W.I.A. Federal President's Annual Report, 1961-62	12
A Like-New Mixer Circuit	4	W.I.A. Queensland Division Convention	16
A G.G. Linear Amplifier	7	13th North Coast and Tablelands (VK2) Convention	16
Some Notes on Bandpass Crystal Filters	8	W.I.A. D.K.C.C.	15
A Transistorised Converter for 144 Mc.	9	W.I.A. 50 Mc. W.A.S.	19
Technical Correspondence: Errata—"For 268 Mc. Enthusiasts"	15	Federal and Divisional Monthly News Reports	23
Hints and Kinks: Dial to Read 0-360°	9	Correspondence	22
26th Federal Convention at Perth, 1962	11	DX	17
		Sideband	21
		SWL	19
		VHF	20

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— then you should contact the MULLARD technical information service, who will give you all the data you need to confirm your choice.



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MT315A

STATION TEST EQUIPMENT:

THE MODMETER

G. C. JENKINS,* VK4QJ

FOR the past four years a "Mod-meter" has been part and parcel of the gear at this station, and it has proved to be practically indispensable. This was borne out when, due to a failure in the power supply, the "Modmeter" was not in use when a new rig was put through its paces; but more of that later.

The "Modmeter," as the name implies, is a cathode ray tube with associated circuitry used for monitoring purposes; it functions both on transmit and receive.

Reference to Fig. 1 will show that the circuitry is not involved, few parts are used, and, other than the placement of the power transformers, no particular skill is required as the construction is not critical. It may be built by any Amateur who can use a soldering iron.

Basically, the circuit comprises an i.f. amplifier (V1), a c.r. tube with associated voltage divider network, and an audio output monitor (V2).

Valve types are not critical. I used a 6AC7 for V1, but any suitable r.f. pentode may be used here providing that all electrodes are fed with the correct voltages; similar remarks apply to V2 and V3. Any c.r. tube may be used, and if the Amateur already possesses a c.r.o. with separate connections available to the deflection plates, then V1, V2 and V3 may be built as an outboard unit and connected to the station c.r.o. If another c.r. tube is used, it will be necessary to arrange for the correct voltages to be fed to all electrodes and thus the circuit (dotted in Fig. 1) will require amendment.

FUNCTIONS

Valve V1 is used as an i.f. amplifier, being coupled to the receiver by a length of co-ax cable. In my case, I have it connected to the receiver detector diode in series with a 3-30 pF. Philips trimmer. Transformer T1 is an i.f. transformer to suit the i.f. used in the receiver (in my case 85 kc.—but any frequency can be used). Valve V2 is connected as an infinite impedance detector, and the rectified audio is applied to one of the horizontal deflection plates of the c.r. tube (an ACR10) when the unit is in the trapezoidal position (T). Audio output is also available from V2 via the audio output jack, but this connection is not recommended, as the shunting effect of the headphones reduces the screen pattern size, when switched to the T position. It was for this reason that V3 is provided, connected as a cathode follower, and potentiometer R14 makes an ideal audio level control output via J3.

The switching provided by S1b and S1c quite effectively prevents any interaction or variation of loading on the c.r. tube horizontal plate, when going from T to W (waveform) positions. When S1a is placed in the W

● A simple device which can easily be made by the Amateur and which, if correctly used, will enable maximum electrical performance from a transmitter. In addition, it functions on receive!

position, a.c. is fed from the power transformer via R10 and R11 (be careful, these are "hot"!).

The power supply is conventional, although now I am using silicon diodes to replace the vacuum tubes. In addition, experiments are being made with another time base oscillator and amplifier, which will use a third position on SW1 to permit a more accurate analysis of distortion in the transmitted signal, but that may be the subject of a future article.

Potentiometer R4 is a manual gain control for use when on receive, none being necessary when on transmit, as detuning the 100 pF. condenser in the 7193 grid will suffice.

On transmit, I use an external outside aerial, which offers certain advantages. This aerial is connected to L2, which is coupled to L1. The latter winding, L1, is tuned to resonance in the required band. In my case, a 100 pF. variable was used, though any suit-

able value would suit. As is the case when on receive, the r.f. signal is applied to the grid of V2 in addition to the vertical plate of the c.r. tube (pin 7 on the ACR10) and the rectified audio (or a.c.) is used as formerly.

If your receiver is muted on transmit (as is mine), no switching from transmit to receive is required, it being done automatically.

As already stated, construction is not critical regarding layout, but if the power supply is on a separate chassis, it does overcome the problems of magnetic fields affecting the c.r. tube trace. If you desire to use the same chassis, place the p.t. at the back of the c.r.t. and place a metal shield between the p.t. and c.r.t.

SETTING-UP FOR RECEPTION

A 3-30 pF. trimmer is connected to the receiver second detector diode and to a length of co-ax cable (RG59U) terminating in a suitable connector on the "Modmeter" chassis (J1).

Tune the receiver to a point where no signal is being received, place S1 in the W position, and set the 3-30 pF. trimmer in the receiver to maximum capacity. Adjust the i.f.t. in the "Mod-meter" so that the maximum amount of noise shows on the a.r.t. screen, then adjust the 10K pot in the 6AC7 (V1)

(Continued on Page 15)

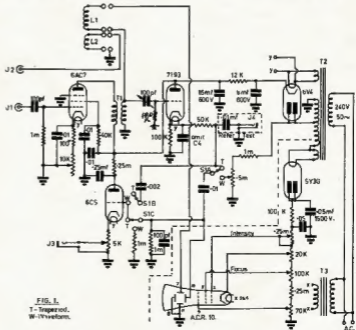


FIG. 1.
T—Trapezoid.
W—Waveform.

A 100K resistor should go from the grid of the 7193 to earth. This has been omitted from the circuit diagram. The h.t. supply for the valves should be 200-250 volts, and to suit the c.r.o. A 350 or 355 volt power transformer would do.

* 26 Miscamble Street, Roma, Qld.

A LIKE-NEW MIXER CIRCUIT*

WOULD you like to improve the sensitivity and the stability of your receiver? If you would, and don't mind delving underneath the chassis a bit, one of the quickest routes is to modify front-end circuitry.

Here's one which has escaped almost everyone's attention since it was first developed. That's why we're calling it a "like-new" circuit; it's been around for a spell but it might as well be new since almost no one knows of its existence.

Before going into this circuit, it might be well to review the characteristics of a good mixer. The ideal mixer in a superhet receiver should (1) produce no spurious frequencies, (2) provide ample gain for the signal, (3) contribute no noise to the signal, (4) provide complete isolation between the oscillator and signal to prevent undesired radiation, and (5) present as light a load as possible to the oscillator to preserve frequency stability.

These characteristics, at least to a degree, are mutually incompatible with most conventional circuits. For instance, isolation of the oscillator from the signal circuit usually requires screening grids in the mixer tube, which in turn raise the mixer noise level and violate objective 3.

The best compromise to date has been the 6AC7 used as a pentode mixer, following the circuit described in Langford-Smith¹. This circuit provided low noise, adequate gain, little in the way of spurious output, and adequate isolation for most purposes.

However, the particular version of the twin-triode cathode-coupled mixer which we're describing here outdoes the 6AC7 on all counts except gain, and runs it a close race there. On top of this, it can be installed in any set which uses an octal-base, a 9-pin, or a 7-pin mixer tube without changing the socket, since suitable twin triodes are available in all three basings.

The circuit is not original; it was found in K. A. Pullen's book "Conductance Design of Active Circuits," a volume² which incidentally should be in the library of every serious Ham designer, and was field-tested in a vintage BC-779 in comparison with both a 6L7 and a 6AC7.

Results were judged on a purely subjective basis, due to lack of test instruments suitable for adequate and accurate measurements. Numerical values mentioned here are calculated figures, but the field tests confirm them as closely as possible.

The full circuit is shown in the schematic, Fig. 1. Table 1 lists parts values and operating conditions which vary with different tube types or design objectives.

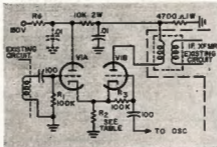
At first glance, you may be led to believe that this is approximately the same circuit as that recommended by Geisler³ or Lee⁴, or may be a version of the Crosby triple-diode product detector⁵. While the general configuration is similar, the circuit operation and its advantages are radically different.

The key point is the low value of plate voltage supplied to VIB. Pullen recommends only that VIB's plate supply be "considerably" lower than that for VIA. The best operation was found with 50- and 150-volt supplies, respectively, and component values shown are for use with these voltages.

By operating the two nominally-identical triode sections with a common cathode resistor but at two different plate-supply voltages, a relatively small change in current in one tube will cause a large change in the gain of the other. This is accomplished without sacrificing average gain in either tube.

In addition, the cathode-follower action of each stage completely isolates the oscillator from the signal circuit. Since the signal sees only a pair of triodes, noise is not increased.

This circuit is a true linear mixer rather than a detector; its output contains only the two original frequencies and the "product" of the original signals (numerically equal to the sum and difference frequencies but without their usual noise content). The chain of spurious frequencies usually found in detection-type mixer circuits is absent.



Those who have tried triode mixers before, even of the cathode-coupled variety, may wonder about gain. Calculations showed that the version gain of about 20, as compared to the calculated pentagrid mixer gain of about 5 under the same conditions.

The test signal was a broadcast station with consistent strength. S meter reading with the pentagrid mixer was recorded and the twin-triode circuit then substituted and mixer alignment readjusted. The S meter showed just under 2 units improvement.

Considering the free-wheeling calibration of most S meters, and this one was no exception, this is a remarkable correlation of theory and experiment. Frankly, we disbelieved it and substituted another tube which had a calculated gain of 13. After re-alignment, the S meter dropped one unit.

Regardless of such gain figures, which are dependent on many variables, not all of which are under control, this version of the twin-triode mixer shows more signal gain than many pentagrid mixers. Its noise figure is so low that mixer noise simply disappears, even with three i.f. stages following. The result is almost complete silence between stations, leading one to believe

at first that the circuit is a dud. Then, though, a fading long-hop signal will come through, moving almost instantly out of the no-signal region into clear audibility, and the design is vindicated.

SELECTION OF TUBE TYPE

Every type of twin-triode tube tested to date works in this circuit, but some give better results than others. As noted in Table 1, oscillator injection voltage requirements vary drastically from tube to tube. In a like manner, sensitivity varies.

Among octal-base tubes, the 6SN7 gives greatest gain but requires higher voltages to get there. The 6SL7 develops its gain (just half an S unit less) with much weaker signals and much less oscillator injection. Therefore, the 6SL7 is recommended.

Dozens of twin triodes are available on 9-pin bases; among the most popular are the 12AX7, the 12AU7, and the 12AT7.

The 12AX7 is directly comparable with the 6SL7, and the 12AU7 with the 6SN7. However, the 12AT7 is the hottest tube available for this circuit, with a gain of more than 100 and comparatively low injection and signal voltage requirements, so it's the only recommended type. If you're willing to change sockets, the 12AT7 is the best for any set regardless of original tube type.

In the 7-pin basing, there's only one choice—the 6J6. Aside from the fact that the 6J6 is the only 7-pin twin triode easily available, it is surpassed only by the 12AT7. Gain is in the neighborhood of 100 (see Table 1).

SIMPLE TO INSTALL

The entire circuit is simplicity itself to install. Remove all old connections from the mixer-tube socket, being careful not to cut short either the grid lead from the tuning coil or the plate lead from the i.f. can. Then rewire according to the schematic.

If you don't have +150v, d.c. available in your receiver (many don't), install resistor Rd and its by-pass capacitor shown on the schematic in dotted lines. Value of Rd must be determined by trial and error. Start with 50K ohms, and work down until you find the resistor which gives 150 volts at point A after everything has warmed up.

With the new mixer installed, you'll have to re-align the mixer tuned circuits. The cathode-follower inputs reduce input capacity so drastically as to completely detune the stage, so don't be surprised if nothing comes through at first.

The input capacity change has least effect at the low end of any band, so it's best to reverse normal alignment procedure and start by adjusting the trimmer capacitors in the tuning assembly at the low end. Simply adjust for maximum signal strength (or higher S meter reading).

Next, tune to the high end of the band and rock the trimmer slightly to see if the adjustment is optimum. If

* Reprinted from "73" Magazine, October 1961.

Tube	6SN7 (also 12AU7)			6SL7 (also 12AX7)			12AT7			6J6	
Value of R2	100	500	1000	100	500	1000	100	500	1000	100	1000
Input—Voltage (Signal)	2.1	10.5	21	0.32	1.6	3.2	1.4	7.0	14.0	2.1	21
Input—Voltage (Oscillator)	2.5	11.5	22.4	0.42	1.9	3.6	1.6	7.0	13.1	2.3	22
Conversion—Gain if i.f. transformer impedance is 50K ohms (for comparison)	18.5	18.3	18.0	13.9	13.7	13.6	100	150	160	80	130

Table 1.—Voltage Requirements for Various Tubes and Value of R2 with Typical Conversion Gain.

not, adjust the trimmer again for the best high-end signal strength.

If the high end required adjustment, return to the low end but this time adjust the coil slug for maximum signal. Then return to the high end and re-adjust the trimmer. You may have to repeat this slug-at-low-end and trimmer-at-high-end procedure several times to restore tracking, since the change in input capacity usually amounts to about 10 pF, which upsets original tracking adjustments. However, with patience the tracking can be made to surpass the original condition.

THEORY OF OPERATION

For the theory-minded, here's how this mixer operates:

First, imagine that the second half of the tube, V1B, is not in the circuit at all. Signal voltage supplied to the grid of V1A varies the tube's plate current, and this variation of current through cathode resistor R2 varies the instantaneous voltage from the cathode end of R2 to ground.

Now add V1B to the circuit, but keep the oscillator turned off. The circuit is now a cathode-coupled amplifier. Since it is biased to operate in a linear region, the only output frequency is the signal frequency, which is by-passed to ground through the i.f. transformer. Output is nil.

Remove the signal voltage from V1A, apply the oscillator voltage to V1B, and the situation is reversed. Now V1B is the cathode follower and V1A the grounded-grid amplifier (with no load in the plate circuit). Output is still zero.

With both signal and oscillator voltages applied, the situation changes. V1B is a grounded-grid amplifier for the signal, but its bias is being changed also by the oscillator signal and as a result its gain varies from zero (at cut-off) to maximum (zero bias) as the oscillator frequency.

Thus, at the instant when signal voltage is high and oscillator voltage is low, V1B will have maximum gain and output will be high. If oscillator voltage is high at that instant, output will be low because V1B's gain will be zero.

This can be expressed mathematically too: The gain of two cascaded amplifiers is equal to the product of their individual gains. That is, $K_{total} = K_1 \times K_2$. In this circuit, K_1 is equal to the gain of V1A and K_2 is equal to the gain of V1B.

However, gain is equal to the product of the tube's mutual conductance and the effective load resistance, and the mutual conductance of a tube is determined in part by its grid bias. If this bias is changing at a rapid rate, as it is in this circuit, the gain will be equal to average gain times the rate at which bias changes, or $K_2 = K_{max} \times F_{osc}$.

Plugging this equation back into the original total gain equation, gives us $K_{total} = K_1 \times K_{max} \times F_{osc}$.

Since the output signal is, by definition, equal to the input signal times the total gain, we have for an input signal F_{sig} , an output of $K_1 \times K_{max} \times F_{osc} \times F_{sig}$, and since a.c. signals are vector rather than scalar quantities the indicated multiplication must be carried out by vector rather than by straight arithmetic methods. The result is that the output consists of the original two frequencies, the numerical sum of the original frequencies, the numerical differences, and nothing more.

Getting away from the exotic mathematics, the big difference between this process and detection-type mixing using non-linear devices such as diodes or overdriven tubes is that only four output frequencies are present. Harmonics and spurious outputs are not.

In addition, the cathode follower is far more tolerant of overload than is any other basic amplifier circuit, and as a result no clipping or distortion occurs in the mixer.

A common problem with many conventional mixers is cross-modulation, in which two carriers become "intertwined" and an unwanted signal rides in on the one you want.

Even under extreme conditions, such as local injection of a signal strong enough to almost block the i.f. strip, cross-modulation could not be induced

in this mixer. Apparently this is another by-product of its unusual method of operation.

Although no tests have yet been made, Pullen's analysis of the circuit indicates that it should provide a good high-output product detector for converting s.s.b. and c.w. to audible signals; simple substitution of an RC coupling network (or an audio transformer) for the i.f. transformer is the only circuit change, though you might want to increase the value of resistor R2.

In summary, this overlooked mixer circuit appears to offer extreme advantages over more-conventional circuits in all of the five characteristics of the ideal mixer, with fewer parts than usually required. It works as well in the set as it does "on paper" in the design stage, and can easily be adapted to any receiver. Try it, and let us know how it works for you.

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A G.G. LINEAR AMPLIFIER

J. K. HERD,* VK3JK

NOW that continuing numbers are converting to a.s.b., a simple and reliable amplifier will be interesting to those in search of such equipment.

For those operators whose exciters have a pair of 6146s, or similar, as output amplifiers, "barefoot" operation is in order provided they work into the recommended load impedance—usually 50 ohms.

For the fellows who build their own, a power supply from the old Class C stage may be employed effectively when modified for linear amplifier use; the main thing being the provision of a capacitor bank of high value—usually 25 and 100 μ F.

Tubes such as 811, 809, 830B, TZ40, 805 and, in fact, any triodes that work well as Class B modulators, make splendid g.g. amplifiers. Tetrodes are not quite so easy to handle, hence the advocacy of the above triodes. With a plate supply of 1,000 volts, 811s or 809s work beautifully, so this article can be meant to refer to their use in the g.g. mode.

Tube sockets are best sub-chassis mounted and in that way we may isolate input from output more easily, and provided the usual care is taken with layout, no problems should arise.

In this regard, particular attention must be given to the parasitic suppressors in the plate leads of the tubes; the resistors used must be non-inductive types of 2 watt rating and have no wire filament in their cores. A 2 watt 100 ohm type has a $\frac{1}{2}$ turn coil surrounding, or concentric with the resistor.

The g.g. filament choke (RFC3) may be home-made by using a bi-filar winding on a ferrite rod, such as is used for a loop-stick antenna in a portable receiver. The inductance is not critical, really, but one should have about a four inch winding at least, of wire sufficiently heavy to take the filament current.† RFC4 is a self supporting

coil of 18 gauge enamelled wire—20 turns of $\frac{1}{2}$ " diameter.

The rest of the circuit is self explanatory, but do not excite the amplifier before the h.t. voltage is applied to the plates, for grid current can go up to 250 mA. in the unloaded condition.

When tuning, dip and load the plate circuit of the final until the dip is hardly discernible, when the grid current should be round 50 mA. Separate meters in the plate and grid are not luxuries, but are there to show exactly what is happening and a reflectometer

or monimatch, likewise, is extremely useful to indicate maximum output. Loading beyond this optimum point by increasing coupling (decreasing value of C4 or C5) merely degrades operation and does not increase the r.f. output.

When installing C4 in the final, it sometimes pays to completely insulate it from the chassis, and earth it at one point only—that at which C3 is earthed.

No troubles should be encountered with the unit with the possible exception that variants of the parasitic suppressors may be needed, but provided

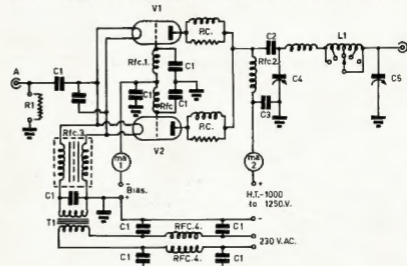


Fig. 2.—Grounded Grid Linear Amplifier.

- C1—0.01 μ F. disc ceramic, 600v.
- C2—500 pF, 15kv. (I.V. type).
- C3—1,000 pF, Simplex disc.
- C4—250 pF, Eddystone (or similar, 1,200-1,500v. rating).
- C5—3 or 4 gang b.c., all sections in parallel.
- L1—Pi net coil—Willis ceramic type.
- MA1—0-250 mA. meter.
- MA2—0-500 mA. meter.

- P.C.—See text.
- RFC1—Eddystone v.h.f. (or similar).
- RFC2—H.I. plate type for use with pi net (Willis).
- RFC3—G.g. filament choke (wound on ferrite rod).
- RFC4—See text.
- T1—Filament transformer to suit tubes.
- V1, V2—809 or 811.

* Sheilborne Court, Mornington, Vic.
† Available from Agis Manufacturing Co.

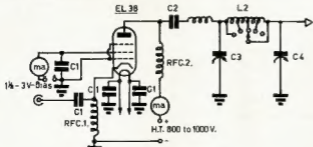


Fig. 1.—Driver Stage for G.G. P.A.

- C1—0.01 μ F. ceramic disc.
- C2—500 pF, 15kv. (I.V. type).
- C3—250 pF, Eddystone or similar.
- C4—3 or 4 gang b.c., all sections in parallel.
- L2—Gelsco Pi-Coupler—Type 4/112.

- MA1—0-100 mA. meter.
- MA2—0-250 mA. meter.
- RFC1, RFC2—Gelsco Pi-Coupler Chokes for Type 4/112 Coupler.
- V1—EL30 (or counterpart).
- Note.—C1 is placed right at tube socket.

due care is taken, nothing serious in this regard will be noticed either.

The required driving power is approx. 25 watts and the amplifier shows a characteristic impedance to the driver of 150 ohms or thereabouts.

For those who intend using it with an exciter having a pair of 6146s, a non-inductive swamping resistor is suggested, as shown at R1, for these reasons: (a) It provides a constant load, (b) Enables reasonable matching, and (c) Avoids overdrive. This latter is important.

Notwithstanding what has been written regarding driving energy in excess of that required for excitation appearing as useful output power, overall performance improves vastly when optimum drive is arranged by swamping excess driving energy resulting

from the exciter being operated in a properly loaded condition.

If there is not enough power to fully excite the final amplifier, then a tube such as the EL38 is recommended and shown in the circuit of the driver stage.

This latter circuit is self explanatory and the same care is used in layout as with the final. Ground the grids, other than the control grid, at the socket, and that one is grounded for r.f. at the socket by a 0.01 μ F. ceramic disc, and i.v. to 3v. negative bias is applied through the meter, depending on plate voltage. Up to 1,000v. may be used on the EL38 in such fashion. When the EL38 plate voltage exceeds 700v. G3 should be left floating and not be earthed. The 811s or 809s are likewise biased, or not biased, according to the voltage on the plates.

Having applied the plate voltage, resonate the plate circuits with C3 in the driver and C4 in the final, and have plate loading condensers at maximum capacity. Cautiously increase loading by decreasing the capacity in these latter condensers, meanwhile maintaining resonance with C3 and C4.

One of the main advantages of a circuit of this type is that we need not

SOME NOTES ON BANDPASS CRYSTAL FILTERS

R. G. ROPER,* VK5PU

AN excellent article on the use of bandpass crystal filters appeared in "A.R." for August 1961.

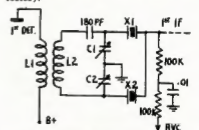
Some further points on filter matching may be of interest. In some cases, where a new receiver is being constructed, or when the first i.f. transformer in the receiver being modified is "get-at-able," input matching, with the use of a purely resistive output load, may be somewhat easier than the incorporation of an additional tuned circuit as load.

The circuit of Fig. 1 has been found satisfactory for optimising the performance of filters using a wide variety of crystals, and even for crystals of differing activity. (Matching crystals by comparing their activity in a stand-

ard oscillator circuit which excites the series mode has been found to be a satisfactory method for multiple section filters, but is not essential for simple filters.)

The only modification to the existing i.f.t. is the removal of the parallel C across L2, which is usually of the order of 100 pF. If not, change the 180 pF. in Fig. 1 to a value such that, in series with C1 and C2, it resonates L2 at the i.f. frequency. (In general, the value of C1 and C2 in series should equal the original value of the capacitor shunting L2—Ed.) Adjustment of C1, C2 and the slug in L2 will, in most cases, provide a satisfactory bandpass curve. If such cannot be achieved, variation in the 100K i.f. amp. grid resistor, or the addition of resistance across L2 (try resistances from 2K up to 50K) should do the trick. For matched crystals, C1 and C2 should have approximately the same value.

If the receiver S meter is used to plot the filter characteristic, remember that with the a.v.c. off (which it must be, otherwise weird things happen as the selectivity is varied inside the feedback loop) the S meter no longer has a logarithmically calibrated scale, but is purely an output voltmeter. Detector output dropping from 59 \pm 6 db. to 55 does not mean a drop of 30 db., but a drop of 6 db. (assuming a linear S scale on the meter, and a linear detector).



The bandpass characteristic of the filter alone has a very pronounced dip between the frequencies of the two crystals. Usually, two i.f. stages after the filter, with four tuned circuits (two i.f.t.s.) will be sufficient to fill up this hole and give a flat top with nice steep sides as the overall characteristic.

A word about layout. Since skirt selectivity of the order of 50 db. down 1 kc. outside the passband can be achieved with this simple half lattice filter, feedback around the crystals must be held well below this figure. This usually necessitates some shielding between input and output of the filter below chassis, as well as between the crystals if mounted above chassis. If the crystals themselves are shielded by enclosing them in small cans (not both in the one can!), make these as large as possible to keep down shunt capacity across the filter output. If a resonant output circuit is used, this is not so important.

* 27 Leslie Street, Woodville, South Australia. Reprinted from VK3 Bulletin.

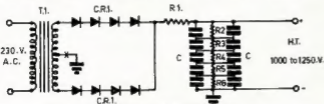


Fig. 2.—Recommended power supply.

C—Five pairs electrolytics in series-parallel (see text).
C1—0.01 μ F. OASII, or International or A.V.V. equivalents or Ducon IN2094 (400 p.p.v.) or IN2095 (500 p.p.v.) (see text).
R1—400 ohms, 100 watts.
R2 to R6—25K ohms, 50 watts each.

T1—Transformer to suit 811s or 809s (see text).
Note.—If it be thought necessary, a 50 ohm resistor of adequate rating can be used in the centre tap at "X".
(Resistors should shunt each rectifier to equalize the voltages across them. Low value silica condensers may also be used.—Ed.)

that it is discharged before touching it, for it has a lethal kick. (Always discharge through a resistor—never by a direct short!)

Silicon diodes provide a cheap and highly effective rectifier bank and reduce heat and a great deal of weight. The type required is one with a rating of 400 or 500 p.v. and replacement type transformers may be employed to give the required d.c. voltage by employing bridge circuitry if necessary.

Since a short duty cycle type supply requires only a current rating of twice steady plate current plus bleed, transformers of moderate rating and low cost can be used. To decide the number of diodes required in series, first determine the p.v. of the transformer and divide by p.v. of the diodes chosen, e.g. if we have a transformer p.v. of say 1,750, then 4×500 p.v. or 5×400 p.v. are required in each secondary lead.

The 1,000 ohm resistor in series with the positive h.t. to the capacitor is necessary to protect the rectifiers from initial surge, and this helps to prolong their useful life.

No doubt the academically minded will have plenty of scope to criticise this arrangement, but those who have heard the signal from VK3OZ and VK3JK in particular can judge its practical value.

provide "stiff" bias and screen supplies, properly regulated, as required in AB1 or AB2, and neutralisation becomes unnecessary.

POWER SUPPLY

Linear amplifiers for s.s.b. require large plate currents for short durations, so we need an energy reservoir of ample capacity to meet the demand and maintain good regulation. A short duty cycle type supply with a very large capacitor across it is the easiest and maybe the best approach to this problem and the capacitor should not be less than 25 μ F., but with benefit it can go to 100 μ F. This capacitor can easily be made by employing several high capacity electrolytics in series-parallel, assembled on a piece of tempered Masonite with a bleeder made up from resistors used across each bank of capacitors. Such a supply has been used here for over 12 months completely free of any trouble.

Ducon (Aust.) make suitable condensers and Type ECS457 (120 μ F., 475 v.p.) or EMG2035 (200 μ F., 400 v.p.) are easy to arrange in series-parallel to provide any desired working voltage or capacity. In my own case ten units are in five banks of two, giving 2,000 v.p. and 80 μ F.

A word of warning in regard to such a capacitor bank is required. Be certain

A TRANSISTORISED CONVERTER FOR 144 Mc.*

J. SPECIALNY, JNR.

● A 144 to 7 Mc. converter is described which provides excellent results in the 2 metre band. Transistors are used throughout, and the only supply voltage necessary is a 12 volt battery.

The circuit (see Fig. 1) is conventional and no difficulty should be experienced in duplicating it. A Philco 2N1742 is employed in the r.f. amplifier stage which is fixed-neutralised by capacitor C5. Capacitance dividers C1 and C2 provide a 50 ohm match to the input circuit. Coil L1 and capacitor C3 form the input tuning.

The base of the amplifier is tapped on L1 to match 75 ohms. Coil L2 and capacitors C7 and C8 tune the output of the amplifier. A portion of L2, together with neutralising capacitor C5, form the neutralising network.

The base of the Philco 2N1743 mixer is tapped down on L2. The output of the mixer is coupled from the collector by capacitor C10 and output coil L3 at 7 Mc. Output winding L4 provides an output at 50 ohms to permit coupling to the input of a communications receiver.

A Philco 2N1744 is employed as a local oscillator and operates 7 Mc. higher than the signal frequency. Coil L5 and capacitors C12 and C13 form the tank circuit.

The local oscillator signal is injected into the mixer emitter through capacitor C11 by tapping the oscillator coil L5.

OPERATION AND RESULTS

The r.f. bandpass is about 4 Mc. at the 3 db. points. A communications receiver capable of tuning the 7 Mc. band should be used as the i.f. system. If a fixed tuned converter operation is desired, the tuning range will be limited to about 2 Mc. with the mixer output coil used. The frequency range of 144 to 148 Mc. can be tuned without touching the converter once the local oscillator frequency has been set. The i.f. system then tunes from 6 through 8 Mc.

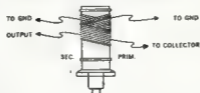


FIGURE 2

COIL DATA

- L1—4 turns 18 bare copper wire $\frac{1}{16}$ " diam., winding length $\frac{1}{4}$ ". Base tap 1 turn from ground end of L3.
- L2—6 turns 18 bare copper wire $\frac{1}{16}$ " diam., winding length $\frac{1}{4}$ ". Ground tap 4 turns from collector end. Output tap $\frac{1}{4}$ turn from ground tap.
- L3—30 gauge Nyclad closewound to occupy $\frac{1}{16}$ " of winding space on a $\frac{1}{16}$ " coil form (see Fig. 2 for construction details) Rod Dot Comm.
- L4—6 turns 30 gauge Nyclad over cold end of L3.
- L5— $\frac{1}{4}$ " turns 18 gauge bare copper wire $\frac{1}{16}$ " diam. spaced to occupy $\frac{1}{16}$ ". Emitter tap $\frac{1}{4}$ to $\frac{1}{4}$ turn from ground end.

Note.—In tuning the 7 Mc. output coil, the powdered iron slug is varied so that it meshes only the collector end of L3.

If continuous tuning of the converter is desired, a vernier dial and a panel can be added to the converter. The communications receiver in this case is operating as a fixed tuned i.f. system operating at 7 Mc.

The power gain at 146 Mc. is about 30 db. and falls off to 27 db. at 144 and 148 Mc. The noise figure of the particular 2N1742 used was 5.0 db at 200 Mc and the overall noise figure of the converter should be no greater than 5.0 db at 144 Mc.

Table 1 indicates the value of collector current flowing in each of the stages.

	Collector Current
R.f. amplifier	2.5 mA.
Mixer	1.7 mA.
Local oscillator	1.8 mA.
Total (with bleeder current)	8.3 mA.

Table 1.

A stand-by receiver switch should be located in the positive leg of the 12 volt supply. The co-axial antenna switching relay should be located as near as practical to the input terminals of the converter.



HINTS AND KINKS

DIAL TO READ 0-360°

Have you ever owned a radio tuning knob that has a metal scale attached to it by screws that reads from 0-100° or 0-180° and you wish it was calibrated from 0-360°?

It is easily done. Undo the screws and reverse the metal scale so that the uncalibrated side shows to the front. Place a 0-360° circular protractor (the same size as the metal scale) on top of the metal plate. Then place the knob on top of the protractor. When everything is in line, bore the necessary holes through the protractor and then assemble the apparatus. This all equals a good 0-360° tuning knob.

Warning. If the tuning knob has a white mark engraved on it for 0° make sure it is in line with 0° on the protractor before boring the holes.

This tuning knob can be used successfully with a vernier on grommet drive.

—Brad Booth, VK5/ZL3

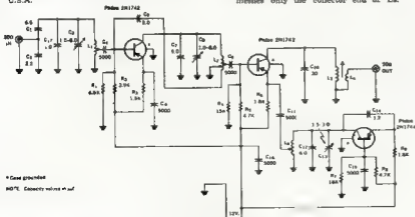


Fig. 1.—144 Mc. Converter.

- C1—6.8 pF mica plus or minus 5%
- C2—22 pF disc ceramic
- C3—C5—1.0-5.0 pF tubular trimmer
- C4, C6, C7, C11, C18, C16—0.005 pF, disc ceramic, 30v.
- C8, C7—4.0 pF, mica, plus or minus 5%
- C10—30 pF, mica, plus or minus 5% for 7 Mc. i.f. output
- C12—8.0 pF, silver mica, plus or minus 5%
- C13—1.5-3.5 pF, air variable
- C14—1.2 pF, axial ceramic

- C17—1.0 pF mica
- R1—6.8K, $\frac{1}{4}$ w. carbon
- R2—3.9K, $\frac{1}{4}$ w. carbon
- R3—1.5K, $\frac{1}{4}$ w. carbon
- R4—15K, $\frac{1}{4}$ w. carbon
- R5, R6—4.7K, $\frac{1}{4}$ w. carbon
- R7, R8—1.8K, $\frac{1}{4}$ w. carbon
- R9—10K, $\frac{1}{4}$ w. carbon
- TR1—2N1742
- TR2—2N1743
- TR3—2N1744

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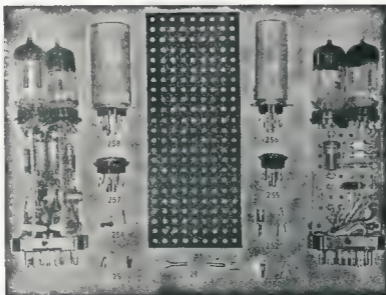
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26th FEDERAL CONVENTION AT PERTH, 1962

The 26th Federal Convention of the WIA was held in Perth at Easter for the first time in 37 years. The 2nd Federal Convention was held in that State in 1925.

The following State delegates and members of F.E. were present:

Max Hull, VK3ZS, Federal Pres.
Bill Mitchell, VK3UM, Fed. Vice P.
Jay Lancaster, VK3JL, Fed. Sec.
Pierce Healy, VK2APQ, VK2 Del.
Alan Elliott, VK3AEL, VK3 Del.
Michael Owen, VK3ZEO, VK3 Ob.
Bert Hinkler, VK4AO, VK4 Del.
Phil Williams, VK5NN, VK5 Del.
Ron Hugo, VK6KW, VK6 Del.
Jim Rumble, VK6RU, VK6 Ob.
Ted Cruise, VK7EJ, VK7 Del.

With the exception of Phil Williams, who arrived by an earlier flight, the delegates from the Eastern States reached Perth at approx. 0215 on 20/4/62. They were met by a number of the locals who had generously made their homes available to accommodate the visitors.

The VK6 Division thanks those members for their patient wait at the airport, caused by the delayed arrival of the plane, and also for taking the visitors into their homes. There is no doubt that by doing so they contributed to the success of the Convention. The delegates themselves expressed their own gratitude at the end of the Convention and all were agreed that they had been overwhelmed by hospitality.

The Convention was opened at 1400 hours by the President (Max Hull), who welcomed the delegates and thanked the VK6 Division for making it possible to hold the Convention in Perth.

The Vice-President, and President-Elect (Bill Mitchell) supported the President's remarks.

Ron Hugo, President of the VK6 Division and Federal Councilor, was the first to respond on behalf of the delegates and local Division. He thanked Federal Council for choosing Perth as the venue for the Convention, and the President for his welcome.

Pierce Healy (VK2 delegate) concurred with Ron Hugo's remarks and expressed the pleasure of the delegates that such an important Convention could be held in Perth, as this also provided the opportunity for most delegates to visit VK6 for the first time.

After the minutes of the 25th Convention had been read and confirmed, the President read his annual report and the reports of all committees and co-opted members of the Federal Council. This report, which will be published in "A.R.", presents an impressive testimonial to the work of F.E. and the members of Federal Council.

Max Hull was elected Chairman of the Convention and before commencing to discuss the agenda items, one minute's silence was observed in memory of the late John Moyle (VK2JU) and Doc Barber (VK5MD) for their untiring work on behalf of Australian Amateurs in general.

The agenda items were grouped into sections to enable subjects of similar nature to be dealt with more efficiently. The sections of the agenda

were: (a) Constitution items, (b) Policy items, (c) Administration items, (d) F.T.U. items, (e) P.M.G.—Regulations, etc., (f) Contest items, (g) Magazine items by VK3 Division.

The agenda encompassed all the fundamental aspects of Amateur Radio, requiring the Convention to sit for long hours in order to deal with the mass of details involved. In four days the Convention actually sat for more than 30 hours.

On the Saturday night a Convention Dinner was held at a local restaurant, enabling the members of the Convention and local Division to get together informally and enjoy themselves. The VK6 delegate was intrigued by the baked bananas and pineapple served and concluded they were served to make him feel at home. The Dinner was enjoyed by all attending and the discussions following it were very informative.

After all the agenda items had been dealt with, the Convention was opened for general business. The items arising in general business were mostly held over because of the lack of time. Despite the time problem, the traditional informal discussion took place after the Convention closed.

The date of the next Convention was fixed at Easter 1963. VK3 offered Melbourne as the venue, but urged Federal Council to consider Sydney as the Convention site if VK2 wished it to be held there and if financial arrangements did not preclude it.

The Chairman (Max Hull) delivered his closing speech, repeating his thanks to Ron Hugo and the VK6 Division for the success of the Convention. He thanked everybody connected with the smooth running of the Convention and finally officially welcomed Bill Mitchell as the President, pledging all his support to him and other members of F.E.

Following the Chairman's closing remarks the delegates made their final comments.

Bert Hinkler (VK4 delegate) praised F.E.'s work and welcomed Bill Mitchell as the new President.

Ron Hugo (VK6 delegate) answered for all VK6 Division to thank the President and Federal Council for the opportunity to repay the hospitality he has received at past Conventions.

Pierce ("Cupid") Healy (VK2 delegate) also thanked Ron and the VK6 Division. He congratulated Max Hull on his leadership during his four-year term as President, during one of the most troubled periods for Amateurs in this country and hoped Bill Mitchell would have smoother times during his Presidency.

Alan Elliott (VK3 delegate) expressed his and VK3 observer Michael Owen's pleasure at being present at the Convention and their thanks to F.E. He also complimented the host Division on its hospitality.

Ted Cruise (VK7 delegate) expressed his agreement with all the previous speakers, also complimented Jay Lan-

(Continued on Page 15)



FEDERAL CONVENTION AT PERTH EASTER 1962

Back row (left to right): Phil Williams, VK5NN; Ted Cruise, VK7EJ; Pierce Healy, VK2APQ; Alan Elliott, VK3AEL; Michael Owen, VK3ZEO (VK3 Observer). Front row (left to right): Ron Hugo, VK6KW; Max Hull, VK3ZS (Federal President and Chairman); Bill Mitchell, VK3UM (Federal Vice-President and President-Elect); Jay Lancaster, VK3JL (Federal Secretary); and Bert Hinkler, VK4AO. Photographer: Jim Rumble, VK6RU (VK6 Observer).

W.I.A. FEDERAL PRESIDENT'S ANNUAL REPORT, 1966-67

It is again my pleasure to present the President's annual report on the activities of the Amateur Service and the work of the Wireless Institute of Australia over the last year.

At the time I presented my last annual report the recommendations of the Radio Frequency Commission's Review Committee, which was a special Ad Hoc Committee set up by the Postmaster-General (Hon. C. W. Davidson, O.B.E.), and the Hon. J. G. Chalmers, Minister for Australian Communications Services in the light of decisions reached at the International Telecommunications Union conference in Geneva in 1964, were unanimously to be placed before the Government.

Subsequently the Government reviewed the recommendations of this Committee and accepted them in their entirety, the action of the frequency table concerning the Amateur Service being notified to Federal Council at the time. I am now pleased to advise that the implementation of the section of the recommended frequency table of direct concern to the Amateur Service will become effective as from 1st July, 1967.

This has been a great achievement and our thanks go to the late John Moyle, Mr. Arthur Tinkler, past and present members of the Federal Executive, the Hon. J. G. Chalmers, and the Divisions, all of whom gave so much of their time and effort to fight the case for the retention of our frequency allocations.

Details of the Amateur Service Frequency Table and types of emission permitted in respect of each band will be found on page 1 of this issue. In this regard the P.M.G. Department has advised the Institute that in view of the projected changes, it will replace all existing Amateur Station licences with new documents which will incorporate the information contained in the statement and these will be issued prior to the implementation of the new table. I understand these details will now be included in the new Handbook for Radio Stations in the Guidance of Operators of Radio Stations in the Amateur Service.

The Federal Executive met sixteen times during the past twelve months, which included two special meetings in connection with the forthcoming Convention and Constitutional matters. During this period, the Executive has been guided by the policy of unity and efficiency which I indicated to me the sincerity and interest taken by each member in the general proceedings of the Executive and the individual work being done by them. This policy was reiterated to support my personal thanks to them for the extent they gave me during the year. In this regard, Mr. J. Mitchell (VK2UW), who acted as Minute Secretary as well as carrying out the extensive duties of Business Manager and Jay Lancaster (VK3RZ), who also carried out the duties of Minute Secretary, were most satisfactory and in a little over a year of office. Copies of the Minutes of all Federal Executive meetings were regularly forwarded to the Federal Councils in each Division and I trust each Council subsequently received reports from their Federal Councils to keep them abreast of the work of the Executive.

The Federal QSL Officer, Mr. Ray Jones (VK3RI) again looked after the sorting and distribution of inward QSL cards, the whole of which efficiency he has applied to this task for many years.

In my report last year I expressed some disappointment at the number of messages handled by the Chairman of the Traffic Committee, the effort spent by the Traffic Officers in maintaining schedules every Monday night. This was a situation which I was determined to like to stress with Federal Councils that the use of a channel for this purpose has been permitted by the P.M.G. Department to facilitate union activities in relation to Wireless Institute administration, and for this reason I would like to see it used more often. Recently Deputy Chairman of the Traffic Committee, Mr. Reg Jepson (VK3JL) ably handled Federal Traffic when directed to do so. It is my hope that this will continue, that, after so many years of faithful service as Federal Traffic Manager, Reg has had to resign from this important position. Mr. Reg Jepson's QSL cards, Mr. Ray Jones has offered to take over operation of the Federal Traffic Channel.

The Federal Contest Committee again completed an excellent year's work organising, checking and compiling the results of the various Contests under the Jurisdiction of the Wireless Institute. It was a pleasure to note the continued increasing interest in the Contests, particularly the National Field Day Contest, which was the most popular and in which has been evidence for a number of years. With

the increasing use of the compact transistorised equipment for mobile and portable operation even greater participation can be envisaged in future Contests. With the popularity that the late John Moyle's name will be attached to the contests, it is hoped that the Contest will reach the same popularity level as the Remembrance Day Contest.

The Remembrance Day Contest itself was again a most popular success of the year and congratulations go to the VK6 Division for gaining first place. The certificates have been delayed this year due to a hold-up in printing, because the material used for the certificate was not satisfactory and a new design has now been completed which I feel safe in saying will be one of the finest certificates issued by the Wireless Institute and should serve as encouragement to Amateurs to compete in the Contest for a "prize winning place".

Dave Rankin, VK3QV has satisfactorily represented the V.H.F. Amateurs on the Federal Executive. V.H.F. activity has continued to expand in all Divisions and several records have been created during the year. The VK6 State record was made between VK6BE and 29200000, and the VK6 Division record was made by Australian 144 Mc record has been beaten by 20 miles by VK6ABZ (portable) operating from Mt. McAllister over a confirmed path of 1,245 miles. In the 144 Mc section, New Zealand, the previous record being held by VK6GL and VK6RO over a path of 1,223 miles in 1961. I understand that the VK6 Division has not yet achieved but they have not been officially reported and checked. Because such activity is of importance in the field of Amateur communications, both nationally and internationally, I would like to suggest that Federal Councils maintain liaison with the V.H.F. Groups with a view to maintaining a record of their reports on long distance communications to the Federal V.H.F. Officer so that complete records can be kept.

It is interesting to note also that a growing interest is evident on 388 Mc. In January 1967, VK3ZCG and VK3SAW made contact over a path of 383 miles. Here is a fertile field for Amateur experimentation and it is hoped to become more active in this part (and upwards) of the frequency spectrum.

There has again been an upward trend in the issuance of A.O.C.P. licences and at the present time L.A.O.C.P. licensees are increasing over A.O.C.P. licensees by 1.3%. At this rate, in five years there will be more L.A.O.C.P. license holders than there are A.O.C.P. license holders.

It will never be the desire of Amateurs generally that the lower frequency bands diminish in popularity and therefore a close watch each year and statistical records will be maintained in order that periodic "drives" can be made to encourage a percentage of L.A.O.C.P. licence holders to take their Morse code examinations.

The official W.I.A. broadcast continued satisfactorily throughout the year and shows which could regularly be monitored in Melbourne indicated a distinct upward trend in standard. The presentation material by the Institute was of a higher order and many commendatory remarks have been heard in relation to the interesting programme material which has been presented. The use of the Institute's interesting use of tape recorders has also facilitated the presentation of the broadcasts which at all times has been of a high standard.

After countless hours of preparation of material in support of a request to the P.M.G. Department for the introduction of a Novice Licence, this has again been refused by the Department and hope of the correspondence in this regard will be forwarded to the Divisions in due course. Although this is disappointing, it is my hope that the refusal made at a later date in view of the reasons supporting the refusal being unsatisfactory to the Institute.

Slow Morse Transmissions continued in most Divisions and are proving of great benefit to those studying for the A.O.C.P. and requiring additional practice. Although remarks are occasionally heard that operators are not called back after their transmission as an indication that it was taken down by the listeners, I believe that generally speaking these transmissions are of value and should be maintained as a service to members and prospective Amateurs. In this regard it would like to appeal to the Divisions to review the provisions laid down by the Department in relation to permission to transmit slow Morse, as it is my hope that this will result in transmissions from time to time should be notified

to the Wireless Branch in the State concerned and the Federal Executive.

Last year I said that VK3WIA would be on the air with regular transmissions. Due to circumstances prevailing it has not been possible to maintain this regular transmission. The matter has now been moved to the residence of the Federal Treasurer, Mr. Bob Boase (VK3NI), where work is progressing to complete the building of this room and the matter was kindly donated by members of the Federal Executive and these are in the process of being stripped and repainted prior to erection.

Representatives of the Federal Executive conferred with the P.M.G. Department during last September regarding arrangements to be made in the Handbook for Guidance of Operators of Amateur Wireless Stations, and a number of anomalies were removed. In accordance with the International Telecommunications Union reference to Amateur transmitters, the new issue of the Handbook will be known as The Handbook for the Guidance of Operators of Radio Stations in the Amateur Service, sections therein being amended accordingly.

Our official journal, "Amateur Radio", has been issued regularly and no doubt the improvements in format have been noted. The Publications Committee have put a most worthwhile effort into this journal, which is the most attractive cover but it is only by advertising support and sales of the magazine that they can be maintained. I would like to thank the members of the W.I.A. who have made out effort to increase sales of "Amateur Radio" in their State and in this regard really represent the W.I.A. and I am sure they have agreed to as a Federal Policy many years ago.

Although Australian Amateurs have not at this stage been able to participate very much in the various satellite tracking projects conducted by the I.R.L., the W.I.A. has been followed with keen interest. There has been a request for Australian participation and I am sure that the W.I.A. will be represented by the Oscar Organisation as co-ordinator for all reports from VK Amateurs who are able to track the satellites. The W.I.A. has also had the number of Amateurs nor the finance to implement such projects ourselves, but it is pleasing to contribute as much as we can and our congratulations are extended to VK3HO.

Amateurs once again were of value with their assistance in the investigation of a very Victorian bush fires which devastated a wide area of the Dandenong Ranges maintaining important V.H.F. links between control agencies and mobile vehicles. The Victorian Fire Authority Headquarters in Melbourne Press and radio carried many reports of chaos with communications and confusion of authority and the experience pointed up many weaknesses generally in the existing communications networks, both Amateur and Commercial, in which, whilst in a way detracting from the able service rendered by those Amateurs involved, did prove that W.I.A. organisation was of value to the community. The following final message to the Institute from the Chief Radio Officer of the Country Fire Authority speaks for itself:

"We express appreciation to the Wireless Institute for their magnificent co-operation with the Authority over past few years. You worked unparagonably during the crisis, and we admire your efficiency and equipment. We will always call on you in the future for help. Thank you for setting up this important link today."

Despite modern precautions, emergencies are inevitable and therefore the usefulness of an organised Emergency Network should never be permitted to lag. In official defence circles there has been a growing interest in the W.I.A. Emergency Network, and the W.I.A. Emergency Network has not perhaps progressed as far as it should have been. It is my hope that the W.I.A. (VK3IAG) to submit a report on the current position which you will hear later in the proceedings of this Convention. In the meantime I believe that Mr. Glover will be sending out the official W.I.A. Emergency Identification Cards for use by W.I.A. Emergency Networks which will be available to the W.I.A. and to be used when emergencies arise that of authority to enter the emergency areas.

However, such identity cards cannot be issued until the W.I.A. has been made mandatory that each Division properly form

His W.I.C.E.N. Network into an operating machine which will be trained in procedure and network operation to co-ordinate with whatever institution is authorised or in control of the emergency, so that chaos and confusion just cannot exist. In this way the Amateur Service can be of real value and be an officially recognised Emergency Service. Essentially this problem remains with individual Divisions to implement its own organisation and standards. It is a matter being by the Federal Executive many years ago, the general procedure for which has never changed in its general aspects.

The entire gamut of Amateur interests, as briefly touched on in this report, and many others which time and space precludes me from including, is obviously centred around membership. Our Institute is still growing but there are many more aspects to be fostered and encouraged before we can really say we are out of our teenage. Many dozens of zealous Amateurs in the past have paved the way for the current growth of the W.I.A. but it is only by membership that we can hope or expect to progress further. At the present time, from an approximate total of licenses issued by Australia only 83% are members of the Institute. This is a position which must be improved upon and it is up to the Federal Council of today to take steps to improve the situation with a view to implementing changes which will bring about a "Change-of-heart" by those Amateurs who, for reasons of their own, don't want to support the Society which has done so much to preserve their domain for them. I believe this can only be done by re-constitution of the Institute as a new organization—and this will be under discussion during the Convention—and added attractions in general activities which will encourage Amateurs to join.

As at the end of February 1963 the State membership figures were as follows—

	Full	Associate	Total
VK3	210	114	324
VK4	310	114	424
VK5	287	185	472
VK6	205	187	392
VK7	203	71	274

These figures—which neglect VK1, VK8, VK9 and VK10—show a total of 3,183 full members and 958 associate members, making a total membership of 4,141. This is a significant increase of 300 since the last Federal Convention held in Melbourne in 1959, although in strict fact the full members listed here are 309 and the associate members dropped by 65.

But let us have a look at the total number of licenses in the Commonwealth—

VK1	1377
VK2	448
VK3	448
VK4	448
VK5	320
VK6	397
VK7	287

This shows a total of 4,141, again neglecting VK1, VK8, VK9 and VK10.

Now I commend this matter of membership to the serious study and the direct concern of the Federal Council. All the administrative work, both by Councils and the Executive, goes for naught if the membership is not there, and I believe our activities are more than a 58% membership of the total licenses, even if it means scrapping our present-day system or at least thoroughly overhauling it. I don't propose at this stage making suggestions about how it should be done, but I believe it can be done and must be done and this very Convention held here in Perth during the year of the British Empire Games could easily be the chopping block and the commencement of a new era. I sincerely hope it is because, and let us face facts, the problems ahead in the world of communications have only commenced to be a problem on a world-wide basis and if we don't plan our organisation now to combat the problems of tomorrow, we shall have only ourselves to blame. Don't take this attitude as "defeatist" for that is farthest from my mind, but the obvious and irrefutable facts of the world's communications problems are there for anyone to see.

The day of procrastination has passed us by. We must all think on a national basis. We must think in terms of making our Institute not just our Division, the powerful voice of the Amateur Service. The activities of every Division of the Institute, I believe, must be so integrated with each other that with its Executive body that we speak as one voice in the future defence for the existence of Amateur Radio. Some indication of the progress reached by membership because membership not only provides the finance, but the personnel to carry out the work, and I therefore commend to the earnest attention of every Division

of this Institute the importance of increasing the 53% membership it has of the 4,000 odd licenses in this country.

This is the conclusion of my fourth year as your Federal President—four years I have thoroughly enjoyed, particularly the years of our fight for the retention of the frequencies assigned to the Amateur Service.

I would like to take this opportunity of thanking all those members, past and present, who have served on the Federal Executive and the Divisional Councils during my years as President for their loyal contribution of time and energy in the interests of our great and unique hobby. After eleven years on the Federal Executive I am fully aware of the effort which must be made by all who take

up office in the administration of an Institute like ours which must reach the length and breadth of our great Commonwealth and I admire and appreciate the work that has been done.

At the conclusion of this Convention, Mr. Bill Mitchell (VK3UM) will occupy the chair of the President of the Wireless Institute of Australia, and I would like to extend to him my sincere wishes for a successful term of office and to offer to him and the other members appointed to the Executive for the ensuing year my loyal support as Vice-President. May the Institute and the Amateur Service ever prosper.

—G. Maxwell Hull,
Federal President, W.I.A.

WIRELESS INSTITUTE OF AUSTRALIA—FEDERAL EXECUTIVE

Balance Sheet as at 28th February, 1962

Current Liabilities:		Current Assets	
Accounts payable	£ 218 14 0	Commonwealth Savings	
Convention Fund	804 19 4	Bank	£1208 8 7
Trust Fund	150 8 8	Accounts receivable	515 8 0
T.U. Fund	454 10 8	Stock on hand	247 14 7
	£1608 12 8		£3229 14 11
Accumulated Funds:		Fixed Assets (at cost, less depreciation)	
Balance 1st March, 1961	£608 3 6	Furniture and Fittings	£16 19 10
Add Surplus of Income over Expenditure for year	181 14 7	Typewriter (No. 1)	23 15 0
	870 18 1	Typewriter (No. 2)	21 15 0
		Duplicator	13 10 0
		Tribune	13 10 0
		Equipment—VK3WIA	48 8 0
			249 16 10
	£3279 10 9		£3279 10 9

We have examined the books and vouchers of the Wireless Institute of Australia (Federal Executive) for the year ended 28th February, 1962. In our opinion the above Balance Sheet is properly drawn up so as to give a true and fair view of the affairs of the Federal Executive as at 28th February, 1962, and the attached Income and Expenditure Account is properly drawn up so as to give a true and fair view of the results for the year ended on that date.

Stock on hand at 28th February, 1962, has been accepted on the Certificate of the Treasurer, Melbourne, 18th April, 1962.

David Fell & Co., Chartered Accountants.

WIRELESS INSTITUTE OF AUSTRALIA—FEDERAL EXECUTIVE

Income and Expenditure Account for year ended 28th February, 1962

EXPENDITURE	INCOME
Depreciation	£37 10 8
Maintenance	8 12 8
QSL Bureau Expenses	8 0 0
DXCC Expenses	15 15 0
Postage and Telephone	20 9 10
Printing and Stationery	88 2 7
Insurance	11 2 10
Licence—VK3WIA	1 0 0
Carriage and Storage	19 1 10
Recording Tapes	15 10 0
Surplus of Income over Expenditure	181 14 7
	£334 4 3

WIRELESS INSTITUTE OF AUSTRALIA—FEDERAL EXECUTIVE

Statement showing Movements of Funds for year ended 28th February, 1962

CONVENTION FUND:			
Balance in hand as at 1st March, 1961			£11 11 10
Add Contributions—Special from Western Australia		£300 0 0	
Regular from—New South Wales	£178 0 0		
Victoria	148 0 0		
Queensland	80 0 0		
South Australia	80 0 0		
Tasmania	38 0 0		
	500 0 0		850 0 0
Less Expenses—Printing for Convention			£811 11 10
			8 12 6
Balance in hand as at 28th February, 1962			£804 19 4
TRUST FUND:			
Balance in hand as at 1st March, 1961			£103 1 7
Add—Sales of "Call Book Magazine"	£37 12 9		
Profit on Sales of "A Guide to Amateur Radio"	10 15 1		
	48 7 1		£109 8 8
Balance in hand as at 28th February, 1962			
INTERNATIONAL TELECOMMUNICATIONS UNION FUND:			
Balance in hand as at 28th February, 1962 (unchanged)			£434 10 8

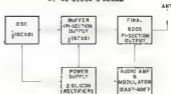
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MODEL HT-40 TRANSMITTER

Hallcrafters HT-40 is a carefully designed c.w. and a.m. transmitter with features as important to old timers as they are to novices. Its compact size and light weight are ideal for use when space is at a premium. A perfect match for the SX-140 Receiver. And, last, but not least, band coverage of 80, 40, 20, 15, 10 and 6 metres. HT-40 (factory wired). HT-40K (kit).

HT 40 BLOCK DIAGRAM



FEATURES

- ★ Full 75 watts peak input, a.m. slightly less on 6 metres.
- ★ Six-band output (80, 40, 20, 15, 10 and 6 metres).
- ★ Two modes of transmission—c.w. and a.m.
- ★ Distortion on amplitude modulation less than 8%.
- ★ Hum and noise on the carrier down 35 db. or more.
- ★ Modern styling.
- ★ TVI-filtered.
- ★ Crystal controlled with provision for use of external v.f.o.
- ★ 52 ohm tunable pi network output for harmonic suppression.
- ★ Dual range meter for accurate tuning and carrier level adjustment.
- ★ Ideal c.w. keying.
- ★ A.m. modulation built in.
- ★ Matches SX-140 receiver for styling and band coverage.
- ★ Tubes and functions:—
 - 6DQ5 power output amplifier.
 - 6CX8 oscillator - multiplier-buffer.
 - 6DE7 audio amplifier-modulator.
 - 12AX7 microphone pre-amplifier - first audio amplifier.
 - Also two high efficiency silicon diode rectifiers

Front Panel Controls:

- Function Power Off, Tune, Stand-by, A.m., C.w.
- Band selector 80, 40, 20, 15, 10, and 6 metres
- Drive: Cannot tune to harmonics of desired output signal.
- Crystal-V.f.o. Switch.
- Crystal-V.f.o. Pin Jacks; accommodates Crystal or V.f.o. input.

- R.f. Output-Grid Current Switch, permits meter to read grid current or r.f. output.
- Key Jack, permits easy connection of the T.O. Keyer or Hand Key to the Transmitter
- Plate Loading 0-100 Permits adjustment of plate loading to match antenna impedance.
- Plate Tuning. Adjusts final tank circuit to desired operating freq

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- Microphone Connector.
- Microphone Gain Control.

General:

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Sole Queensland Agent: GENERAL IMPORT DIST., 135 Lutzow Street, Wellers Hill, Brisbane

Sole West Aust. Agent: NEIL JAMES & CO., David Jones Arcade, Barrack Street, Perth

THE MODMETER

(Continued from Page 3)

circuit for maximum gain. Now switch S1 to T and decrease the capacity of the 3-30 pF. receiver trimmer until the background noise only creates a small trapezoidal pattern on the c.r.t. screen. Only a small capacity will be needed for good response.

SETTING-UP FOR TRANSMIT

Adjust L2 for resonance in the required band and connect the external aerial to T. Then alter the 100 pF. condenser in the 7183 grid for maximum pattern height on the c.r.o. Back off L2 until the vertical trace on the c.r.o. occupies about one half to one third the screen height.

PATTERN INTERPRETATION

It is suggested that the A.R.R.L. Handbook be consulted in order that the user can become familiar with the type of pattern presented on the screen of the "Modmeter".

GENERAL

If you take my tip and build this unit you will see, as I have done, why so many signals don't sound right. It will be very obvious how incorrect many Amateurs are when they say "You could do with more audio OM". In many cases the station concerned is already peaking over 100% modulation! Furthermore, you will also see that many stations only peak 50-60%, then wonder why they do not receive flattering reports.

The main point is that with the "Modmeter" you know just how you are modulating, hence can avoid the offence of over modulation. (In addition, you can listen to your own horrible audio before criticising the poor quality from the other station.)

By using an external aerial for "transmit" the "Modmeter" becomes a versatile and accurate field strength meter. It will enable you to load your rig for maximum radiated power, and not rely upon plate current meters, pea lamps, etc. When used for loading and tuning adjustments, I have found the "Modmeter" enabled me to eliminate harmonic radiation which was previously quite strong some half mile away from the station.

Using the "Modmeter" to give truly candid reports to the other station may not be in the best interests of winning friends—but you can be assured your signals are clean.

For those who use c.w., a transistorised r.f. powered b.f.o. could readily be constructed to fit into the "Modmeter" case, so enabling you to possess a complete monitor.

Should you require additional details you may contact me on 20 or 40 metres, or use the 600-ohm lines.

From the foregoing you will have gathered that I am really wrapped up in the virtues of the "Modmeter", and believe me after you have built your unit, you will wonder why you ever thought they were just a gimmick.

I look forward to seeing you on the band, but watch your modulation, as I will be!

[This article has been based upon an idea originally presented by "CQ" Magazine, under the title of the "Monomocor"—Editor.]

Technical Correspondence

ERRATA—"FOR 288 Mc. ENTHUSIASTS"

Editor "A.R." Dear Sir, Some errors and omissions have unfortunately occurred, both in the original "Bulletin" article and its subsequent "A.R." counterpart.

C1 is referred to in the text, but is not specified on the circuit diagram. It is the 100 pF. from crystal to ground.

The plate decoupling resistor of the pentode section of the 65L3 should be 2.2K, not 22K.

Similarly, the 832A tripler grid resistor should be 47K, not 4.7K.

Some coil data is missing. In any efficient multiplier chain, proper L/C ratios are of the utmost importance.

L1 is 30 turns, No. 33 B. & S., on an Aegis 1" diam. slug tuned former in miniature can.

L2 is 6 turns, No. 18, on 1" diam. with turns spread so that 48 Mc drive to the triode section can be peaked with the 25 pF. trimmer just meshing.

L3 is 4 turns, No. 18, on 1" diam., as is each half of the 832A tripler grid coil.

For the various currents specified, h.t. is 250V.

Addenda.—In the interests of efficiency, all fixed C should be mica, and the trimmers air dielectric with ceramic insulation. A PTFE tube socket is preferred.

Sorry all this information was not in the original article (which was a report of part of a lecture).

—Bob Roper, VK5PU.

R.D. CONTEST, 1962

The Remembrance Day Contest will be held on Saturday, 18th and Sunday, 19th August, this year. Owing to lack of space, the rules have been held over until next issue.

IT HAS BEEN SAID . . .

"We, all of us, have our own way of doing what we feel to be our best. No amount of exhortation on my part will change this in regard to institute activity. During the past eighteen months, as Divisional President, I have urged, enjoyed and exhorted members in what I have felt to be the best interests of Amateur Radio movement, the W.I.A., and the N.S.W. Division. The amount of useful reaction produced can only be classified as minute."

"Two years' service on Council is more than average for the N.S.W. Division. This is in striking contrast, for instance, to the Victorian Division where Councilors go on for years after year, almost like the proverbial brook. Perhaps service on the N.S.W. Council is more rigorous or would 'hazardous' be a better word?"

—President, N.S.W. Div., Bill Lewis, VKYRB.

LICENSED HUSBAND AND WIFE COMBINATION

The Bundaberg Radio Club, wishing to publicize and promote the interest of Amateur Radio, published in the local press that we believed Mrs. Jocelyn McGrath (who has just obtained her full Amateur licence and Rusty 47M to be the only husband and wife full licence combination in Queensland and probably Australia (There are others in Australia Ed.), and also that Jocelyn was the only fully licensed XYL in Queensland. The club would greatly appreciate news of any other husband and wife combinations or fully licensed XYLs. We believe it is almost more likely that an Amateur Radio and, in fact, Bundaberg has two XYLs in its present class of 34 students.

So any combinations mentioned above, let's hear from you please. We need you to bolster up our publicity campaign to fill those bands, which we are forever fighting to hold, with new recruits.—VK6ZMZ.

FEDERAL CONVENTION, 1962

(Continued from Page 11)

easter on his efforts as Federal Secretary.

Phil Williams (VK5 delegate) claimed the other speakers had left him nothing to say. He complimented VK6 on the arrangements for the members of the Convention.

Bill Mitchell, the new Federal President, stated he has attended eight Conventions so far, and the 1962 one was the best he can remember. The conference room made available by the co-operation of the Australian Broadcasting Commission enabled the conference to be held in comfortable and suitable surroundings. To the host Division he gave his thanks for the arrangements for the Convention and setting a standard for following host Divisions to aim at. He also expressed Federal Executive thanks to all Council members and stated his wish to be able to serve the W.I.A. as ably as Max Hull has done in the past.

The Convention finally broke up at 5 to 7 on Monday evening, after one of the most extensive studies of Amateur Radio in recent years. While the decisions of the Federal Council will no doubt be detailed elsewhere, the spirit of friendly compromise impressed the writer as perhaps the outstanding feature of this Convention. While this spirit exists between the Divisions, one has little doubt as to the future of our Federal body.

—Alyn VK6ZDM.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE			
Call	Car. Cnt. No. rises	Call	Car. Cnt. No. rises
VK1AB	43 298	VK6KW	4 208
VK6RU	5 280	VK1ATN	95 304
VK6MK	43 252	VK4HR	12 129
VK3AHO	51 238	VK6RW	23 184
VK4FJ	21 230	VK3BZ	3 178
VK3WL	14 211	VK4WF	15 173

New Member:

VK1AAK 58 130

C.W.

Call	Car. Cnt. No. rises	Call	Car. Cnt. No. rises
VK3KB	10 300	VK6RU	18 222
VK3CX	38 298	VK4AR	8 218
VK4FJ	21 230	VK3BT	48 215
VK3NC	19 225	VK7LE	17 212
VK3FH	15 226	VK3VL	39 211
VK3BZ	3 225	VK3AGH	71 204

New Member:

VK6NQ 73 184

Amateur:

VK3ARX 66 179 VK7SM 72 122

OPEN

Call	Car. Cnt. No. rises	Call	Car. Cnt. No. rises
VK3ACK	6 300	VK3BG	3 261
VK6RU	5 280	VK3AHO	70 238
VK4FJ	21 230	VK4HR	7 233
VK3NC	19 225	VK3BZ	4 231
VK3WL	14 211	VK3BZ	4 229
VK3AGH	63 253	VK3WL	45 225

New Member:

VK3TL 85 100

Amateur:

VK3NQ 81 178 VK7SM 84 241

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ADDRESS CORRESPONDENCE FOR THIS PAGE DIRECT TO THE SUB EDITOR

This month the 14 Mc band has been open fairly consistently to Europe via the h.p. through South America, from about 0400 to 0800 hrs. GMT. This is pretty well true to form, but by the end of May this path on 14 Mc. should be on the way out.

Both the 40 and 80 metre bands are down somewhat on the previous month or two, and not much of any significance can be heard or worked.

In the mornings around 2500 G.M.T., it would seem that on 7 Mc. the southern VKs can work W on this path. However 14 Mc. is much better at this time with a variety of workable signals from Europe, America and sometimes Central and South America.

El Mr. around 2200 hrs. G.M.T. has been irregularly letting a few signals through from the West in the form of Central and East Coast Americans.

NEWS AND NOTES

From the Florida DX Report there comes the news of activity from CR10 W stations have claimed to have worked CR10AB, CR10AS on the 14 and 21 Mc bands. QSLs are to go via WTVY WTVY says, "It's news to me." And it sounds phoney to me—AL.

Did you work Gus W4BPD when he was operating on 347BW. By the time this news reaches you he has completed his expedition to VQ7. More news on his next moves in the following issue!

New Prefixes. TGI will be changed to 3X
Togo prefix will be changed to 3V should any
activity occur from there

Tibet. ACAN has been heard and QSOed by several stations. Two frequencies are mentioned, 16408 Kc at 1600 and 14094 Kc. at 2300. Beam headings seem to be correct, however so far we have no knowledge whether this station is still active. ACAN has been listed as a doubtful VU2MD has seen ACAN is still in Bikkin and has been inactive for a couple of years. Also ACAX last reported he saw no prospect of Tibq activity in the foreseeable future. KRGFQ reports ACAN could be heard 11:40 on Feb 1964. WACR reports he heard ACAN coming through over Northern Europe from 2000-2100.

Danny's next stop will be one of the Isles Markub, Flint, Vostok or Malden. They stand a better chance for separate DXCC status than the Marquesas. On e.v., Danny mostly operates on 14065 Kc. usually between 3300-4100; on a.s.b./m. the freq. is 1418 Kc. usually between 3000-3300. His next stop will be the Tokelau group and then on to K56. From there it's an easy jump to Apla in the New Samoan Republic should there be a chance that that nation could count as "separate." At this time decisions will be made for next stops which could include the Tokelau, Wallis Is.,

Cocos Keeling, VKSLA, active around 1420-1500z, crystal controlled on 14017 Ke with 20w.
Neutral Zone Paesthr. W2CTN has just received a letter from SN2KHK/ZD1KHX/KC. He is now about to come on the air as ZC-6UNJ. W2CTN will be handling the QSL chores. This is the U.N. Zone between Israel and Jordan.

How's your c.w. operating ability, KV4AA. Dick Spenceley, is searching for a really good man to handle a DX-pedition into TRS, TLA, TYI, and SV, etc.

BRI VKSAHO writes concerning his forthcoming expedition to Wallis Island. BRI will leave tomorrow for a conference with CENEAC. Details

leave Normus in company with FKAS during the first week of June 1962. Operation will be a.m. and c.w. by FKAS and a.s.b. and c.w. by VK3AHO. Call used will be VK3AHO/FWS. QSLs are to go via W4ANE, but the handler for the VK QSLs is yet to be appointed. Frequencies are to be announced soon. BH is a keen 80 and 40 metre man and will work those bands as long as conditions are favourable. Please keep me posted Bill.)

Steve VIKOVK is now home from the stormy seas and the wintry Antarctic wastes. But not for long. Before you read this he may be on his way to the States, where after a short stay he will be returning to the Antarctica where he promises Ham activity during 1963 with a.s.b. included. (More details later.)

CR4AR seems to be active on the 14 Mc. band on c.w. round 2030x, but difficult to reach because of the last Wynnham. Hm m.

Walter Plant, VQ4FO, is migrating to Australia to settle in Brisbane, in July. (Let's give him the Aussie welcome!)

Bro. Kinsella, VK3AXK, reports that there is a fair bit of good DX to be had on a.s.b. 40 mx at night our time. There's lots of Ws who have two and three element beams and 50 sigs to match. JAs are active and a few South Americans are being wk'd. Best time for the latter should be around 1300 hrs. G.M.

Troubica and Danny Well. The "Yasme" needs a new crankshaft. If he escapes the nuclear explosions, the next port-o-call is to be Filad in *MYSTERY*.

ACTIVITIES

Frank VKQQL landed a nice one or two thens
past few weeks. 7 Mc. wild: CQIBT, KV4CI,
XE10X, CT2AI (0800Z); 14 Mc. wild: DL8VZ,
SV8 Rhode is VF2MV, C0THQ, C0TAH VF-
3MJ VQ6A VQ6BH K3GAD KJ6 3A2BW,
AF3CF, VU2US AC3, QSLs recd. were HV-
1CN, UFGA, VQ6IB, ULFA, HR8G, LX-
1CN, K8RZ, YJ1MG, YS10, CP5Z, VF5BL3,
EL4A, VR1M, 3A3BC, KV4CI, VP5BH, VU-
2NRN

Bud VYKJQJ also has found conditions to his liking and has included some good ones in the following, all on 14 Mc. s.s.b. KR5BA, KAJAO, UABVQ, KG1BO, KJGAD/KJ6, KJ6CA, V91AU, KAJ/L, KAJMM, KK4DB, G1PO, W4ANE, KH6AHQ, W8OUH, W4FGU, K6CFV, WJ1W. Also Ws on 7 Mc.

Let me welcome to this column Bro. Kinnell, VK1AXK, who reports a good a.s.b. list 14 Mc.: DJTH, LAET, VE1ANR, K1WHD W4SZZ, W1PRY, PZ1AX, O4KEA, K2KBU K2B8Q, G1JMD, Q3JAF, D4WN, YN1BH CN8FU, K0NBR, VY1EE, VY1EL, VY1DH, YV-BAEC, SV0WT, Z1JZE, TG5AD, 4X4OC, VR1G VP2DA; 14 Mc c.w.: F2DM, K1BY, H8KKB SMTWTZ P3AKN

Don L222 has not been listening much but
 in these: 1 Mc. c.w.: DJFZB, UBSAU
 DJRFX URSCZ, UAIAGZ and others. 14 Mc.
 JTJKA UYCKY KQGAZ, FQNN VRBAB
 UHBBM YQWRZ, OXZLD OKIGT
 OZBAM 4XNKK EACFY FLEG EBYVC NPJIE
 UIRKBA, SVORU KPMBE VPVVS SMSTH
 14 Mc. s.s.b.: SMSEA DLISD LZJHA, SUTAX
 GZAWZ, DJ4WN, KRSDH, CTIUP, ULTPY, UA-
 IKAR, VYSKAU. 21 Mc. c.w.: KRDL, KOBNM
 JAICGX, 4XADK. 21 Mc. a.m.: VRSED, VK-
 SDG, WSRMK.

DL, W58MA. The seeds in the following logged all
 on 14 Me from between 1300-2300 hrs. E.A.S.T. A.M.
 FYICBS, T1P2J, T1J2C, HMI4AE, UABR00Q, UA-
 00000, QDSC03, QDSC04, QDSC05, QDSC06,
 T1C7U, VE1C7U, XE1CZ, CE4DS, CN2BK, CN-
 000, S.a.b.-KZ5CG VE1AGI, Q12K, XWBA5,
 KVA4A PKRAC FOBAN Q12KX, Q13B2A,
 KVA4A PKRAC FOBAN Q12KX, Q13B2A,
 MP1BW MP4PK I1ANY, U1B5V, DL3WUW,
 P2ICV, DU1AN, P7Y2AE, T1C3B and others.
 David VK3QV reports jagged, the following
 on 38 Mc. A.M. COCHT JAGI, UAG1BQ, UA-
 00000, QDSC03, QDSC04, QDSC05, QDSC06,
 HMI2AD and several others. Heard KX5Z,
 HMI2O, JATCD, 45TVL and lots of Ws, VEs,
 etc. David predicts that the 18 mc band will
 be very busy before it starts to improve around
 1900. SC 1915.

Ken VK3TL found the 80 m λ band very good this past month, especially in the late afternoons when Europe was usually workable. He wkd on 14 Mc c.w.: CZAQ, CTAL, DLXZ, DMHBT, FYTE, GVVV and a dozen others. On 7 Mc he worked: CZAQ, DZLV, TSV LASH, OTHI, OKXDT, OKIUQ, OMNF, PIJKA, MSMBB, UOAAA, UCZAB, VPSMJ, XEIOK, YQZKAC, YUHA, YVACP, ZBICH, 14 Mc. a.m.: FOSAN, HLRTT, HMAQ, KVAAA, KXW, MZC, NQY, QDZ, RYU, SMO, TCHVB, KGAD/KJE, ZS3BY, ZS1ZA and lots of Europeans; 31 Mc a.m.: ZSCDC, ZS1CC QSLs recd were ON4EC OZTUO KSCQV KRCG, HLCEP, OHQTD, KKUUSE, VSARM, VSEHM, W6LNU, CA4EE and many from the Irishland beam. The 90 m λ band was also good. Ken OMJ.

Bill VK3JHO also hands in a nice s.a.b. Hst. 3.5 Mc.: FK8AU, VE3BW; 1 Mc.: VE1DC, VE3BW and many Ws; 14 Mc: FK8AC, FK8AZ, UA3CR/UA1 (Franz Josef), SM7XA, ZB3AD, SV0WT (Crete), SU7AH, KA3AZ, OH9NB, ON4MD, GD0GMB, VR1G, VP2MC, UL7BB and

others: 21 Mc ZSALT, ZSAYP, ZSALB, ZS-
1CG ZSISA ZSIRD, XWAS, BMCR, YBCL.
Eric BERG-95 reports these loggings have
49 m HRAZ, LZPKP, SPILA, UA5AF, UA-
3KQH, UBKST, ZK319, YU2AR, GSGH
5MSTY, LZKHA, LAZHC, UWCB, UACFF
UABEY, SMCKP, UBKSD, 30 mlt VTRB
ASB, B3A, ZS3A, ZS3B, ZS3C, ZS3D, ZS3E,
ZS3F, ZS3G, ZS3H, ZS3I, ZS3J, ZS3K, ZS3L,
UPZAY, VKENK VBSD, YSIO, 45TNE, BY
1PK (1430z). QSLs recd were JT1KAA, OH
3WM (8.8), VZBQL, UAZAW, UCIKAA
UABLE, YKIAK, etc.

Tan VKXZHR reports having heard the following
 ing. 14 Mc. a.m. HC2HT, VE7AKD, F5PIL
 (1KP, G2BAT V81FZ, G3AMM, G3OQO, DP
 8VVL, DUBFC, KM6CE, KC8BI, VY1CJ, V
 7AB, ZK1AR, OA4GI, VS1GE, VR3B, DUJAN
 VE3CAP, VY3WB, TG5ER, K2MMA, CT1BQ
 TG6BM, W1WYM/VE5, VR1G, YN1ST, F5FB
 CN2BK, GY3EQ, P1W1S, etc. 14 Mc. a.b.
 VE7BCM, SM3BIZ, UA8KAR, GM3JDW, U
 2NR LASLG, KR6LY, VY2EL, KX6AE, VU
 BCC CR6AH, KA6AA, FO6AN, TI6P, VR1G
 FK6AC, and others

Hal VK4O reports the 1p. on 14 Mc. good
most days. The best wkcd were DJTJK, CTIVH
FVFN FVNB FORAN GJHDA, OKN X OMHLL
SPADZ, ONAFL, SMUGU, UGSKN, VYSDH
UQSGW, 4SINE etc. Best ones heard on 14
Mc. c.w. were CPSEZ, LZLKEP QESWH PY
SCD, WGMQ/VRI, VYVAE, ULTIKB HASBI
HBSEI, JTJKA, etc. 20 mx am wkcd VK
9RIH, IAHLL, 31 Mc. c.w. wkcd, 4SINE, OK
ICT and Wa.

101 and VKJF, who has now achieved his 10 countries wkcd. on 1 Mc, comes up with this very fine list, all c w GSWP HP1LE, PAOCU CBAAH, KC8CD, KC8BB, BNELKZ, 3H3HD, HS1X KB6J 0M2FN VS4RS, VR4CV HMAAG, 5NE3CUN UA9KPG, YJ1MA, YV2BJ, VR3DM VK9RO ZK1AR, ZF3J, ZS6BKK and many others. (Nice going OM)

George VKSRX wkd these: XH0AB 0248z;
JT1KAA 0000z, VU2US/AC5 (1400z), VPTN
(0618z), COTAH 0630z, KZSTD (0700z), XLDNN
(0814z) Sotkinak is, EA1BC 0855z, IT1AG
(1340z) P31HQ 0000z, DL9KP (1818z). (Com
grate int W3BZ-1st VK.

Peter Drew LA021, has had his first
job. He heard 40 mm a b. WAHZNK JAIAEAE
CGFAAE ZILKE WATUT KIDNE 28 mm a b
MHRI VKRBO ZSNVJ ZYJH FUP VUBP
ZKJH 40 mm a b. KAKA
KRIWA VKOJM HIKKK CNBGS GWJEGJ
ZELJA VKYPT 7SAGU ZS4JO ZYJH 7S
GEMH 20 mm a b KATYA XWAAK UHBAE
DUNF 40 mm a b. KAKA
VQSV PHPT KRSMH HMAAQ CTSF KCK
41MSV VYIKE CNBPU VYZGO M14BBWA
XPICY KPAIC ZSMANE G6TC YNBE GA
KEY XELVJ VYJIE HXKPK and many more.

My thanks to the above chaps who take the time each month to help this column along with relevant bits of info. You can help me further fellows by including all news you may come across regarding Oceania activities...A

人得投資家風範的

VE3BQI SU - W/O E. C. Yeale, 56 C.D.N. Sqdn
UNEE Beam P.O. Beirut, Lebanon

YKIAK Taima Jibway, 28 Omar Mokhtar St.
Damascus, Syria
IKZAH—O. Luhrs, A.P.T. Nacional 1505
Bogota, Colombia

487YL—QSL via K1GBPT for YL Asian confirmation.

VPZLD—Steve De Lima, via Jack Cummings
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VPTMV C/o Cable and Wireless, Montserrat
BW1

VP2SH-R. Nelson Dept of Agriculture, 51
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ADDRESS CORRESPONDENCE FOR THIS PAGE DIRECT TO THE SUB EDITOR

VICTORIA

Last general meeting of the Group, 19 members attended—the biggest roll-up we have seen for some time. Owing to Mac Hilliard being absent, Noel Harrison took the President's chair. A small amount of general business was discussed, then the band reports from Maurice. 19 mx was open to W land, KH8 and JA from 1400 hrs. till 1400 hrs. (E.S.T.). It was open to Ws around midday and to South Africa around 1800 hrs. The remainder of the evening was devoted to Keith SYQ who showed us some very interesting colour slides that were taken on tour of Japan. Judging by the applause given after the show, all members, including myself, enjoyed the slides very much.

Noel LJ101 hopes this coming winter to increase his score. He has recently renewed all the feed line and the three antennas to 300 ohm open line. This has made quite a noticeable difference, especially on the WJVK, it being extremely directional and has cut the noise down quite a lot. Last month Noel heard two new stations in Alaska, they were KL7EZX and KL7EZX, running 5 x 8-3. These two Amateurs have only been in Alaska a fortnight and are looking for reports.

Ian L3865/32HR has been busy over the past few weeks. He is not able to do very much listening on the a.w. bands, but on a few occasions he has turned the gear on the conditions have been nice to listen to. The DX tent is almost impossible to use, as cables have been sent out of late and is now waiting for a few returns. Ian has got his stereo equipment in order or less in order, and is very pleased with the results. The only trouble is a 50 cycle hum from the motor is heard with the volume is increased and a high level of the stereo has been in radio tubes covering the h.c. and a.w. bands, and also the p.m. band.

Maurice KH8 has his HRO finally aligned to perfection on 20, 13 and 10 mx and at this point I will suggest a word of warning to those who are not experienced in the art of "touch" it. A 20 mx duplet was installed by Maurice and it works quite well, but a high noise level is received with the signal, so he says he will dispose of 20 mx with a 20 beam. Cables received on 80 mx s.s.b., YU2DB, also another one from YU2DB on 30 mx s.s.b. 5885.

Ian L3308/32BT hoped to have his 3 mx gear operating mobile during the Easter holidays but due to his s.d.o. not being collected up to 3 mx, the project was not completed. However this 3 mx gear was installed in the car and was used over the Easter period.

Teddy's radio equipment is a real story. It is still having trouble with a xtal locked 30 converter, the problem was the xtal was not working on the third overtone. However, by tuning the coil and testing the xtal it refused to function, so after finding no h.t. on the osc. tube and the feed back winding connected to the wrong way, proceeded to correct it. It now operates on its third overtone but now will not multiply to the correct frequency. However, it has been operating some day, at the moment a 12 element 2 m beam is sitting 20 ft. in the air doing nothing.

PARTICIPATION IN CONTESTS

Have received a letter from Eric Trebilcock which has brought to my notice the very small number of entries in various contests. The letter is as follows:

Dear OM, I feel I must write you a few lines regarding participation in the 1961 VK/ZL DX Contest by the VK S.W.I. I am obliged to do this, after seeing the 1961 VK/ZL DX Contest 19x Section results, and bearing in mind the VK S.W.I. effort in the 1961 R.D. Contest. In the R.D. Contest 13 VK S.W.I. submitted entries and in the VK/ZL DX Contest only my name was fit to submit an entry. Why the lack of entries in the latter event I am puzzled.

I purposely did not take part in the Phone section of the VK/ZL DX Contest (1961), my "score" is for c.w. only. Apparently my intentions in not entering the Phone section, in later years, was to encourage the VK S.W.I. S.W.I.s in this Division "a bit of an open gap", were all in vain! (If the published results meant anything). I would like to see a change in attitude towards the VK/ZL DX Contest 1962, by the S.W.I. of this Division (who proved in the 1961 R.D. Contest that they are not

completely ignorant of what's required of a contest competition)

I therefore state:

- (1) I will not submit an entry containing phone loggings for the 1962 VK/ZL DX Contest (as in 1961)
- (2) I will offer 20x, and 10x cash prizes to the two leading S.W.I. (VK/S) other than myself (if I happen to be in the leading section of this Division) in the 1962 VK/ZL DX Contest, provided at least five of my fellow VK/S S.W.I.s submit entries in this event. (I emphasize the bold type because the whole objective of mine in writing this letter is to get the S.W.I. interested before it is too late—the day may come when the S.W.I. section of the Contest will be deleted)

Would you be good enough to give publicity to the above in any manner you may see fit—bearing in mind the time of the event (around late Sept., early Oct.). At the same time it is not too early to draw the membership's attention to the 1962 R.D. Contest in August. We want to beat VK/S S.W.I.s this year as they justipped us in 1961 (13 entries versus 15 points as against our 13 entries average 350 points).

Thanking you in anticipation.

(Signed) Eric Trebilcock, L3048.

Need any more be said?

VIEWS

The second visit for the year at the Rockbank Receiving Station was attended by 18 members. The personnel demonstrated triple directivity reception of the signals using frequency shift keying and teleprinters. It appears that the triple diversity reception is successful in handling the signals using the one frequency and such being fed with an independent rhombic antenna being spaced a wavelength away from each other. When the signal faded on one rx, it stays constant on one or two of the other rx's, which in result would minimise fading to a great extent and constant signals are received. Also demonstrated was a Collins R-381/URR rx which was opened up for us to look inside. The rx was permeated with dust with a 1/4 stages. The coil of the Collins was thought to be around the 1,000 db. mark.

The next visit will take place on June 1 and will be to Diggers Rest station at 8.30 p.m. On July 6 a visit has been arranged to the Moorabbin Radio Club at 8 p.m. Persons requiring transport for the above visits meet at 74 Victoria Parade one hour before the stated time of the visits.

TASMANIA

Neville L7013 72EE states that activities are very quiet and has written to let the other States know that VK7 S.W.I.s still exist. Nev has been hearing some good DX on 14 Mc. s.s.b. but is not keeping his log up to date. At the moment v.h.f. is taking up most of his time.

BARB WAIL

I wish to thank the following listeners for their letters: Don Granley, Eric Trebilcock, Doug Richardson and Peter Drew.

Eric Trebilcock. QSL cards recently to hand include J7RKA, VQ36QL/SU, UJAAW, ZK-LAK, ALAXX/NDV, and ZK-LAK. Eric has mailed 382 reports for 1962 and has received 183 QSLs from 61 countries, 13 zones. Also heard 110 countries in 1962. Local atmospheric conditions very much unpredictable. In any case, good conditions are very short-lived, and in the main if one wants to be in it when it's going on, there is only one thing to do—and that is to be around at the right time.

Doug L2047 has been listening on the DX bands to date. He has heard 31 zones, 46 countries—all on phone, with 16 countries and 4 zones confirmed. Doug uses a 4 valve 4w handpacked superhet rx. He says the 14 Mc. band is useful to Northern Australia. In 1960 E.S.T. Doug had a fair bit of time to listen due to having a broken leg, probably caused by putting up putting up a "ham" which will be up in the air very shortly.

Peter L4021 reports that conditions have been quite good on 20 mx in the afternoon.

He has been hearing North, South and Central America and in the early evenings ZS, KH8, VU, ZK, W and a couple of other occasional blow-ins. Also heard were Europeans in the afternoons, but were at a weak strength. 40 mx has been very good to W land between 600 1008, especially on a.m. 85 mc has been good for locals, Eastern States and ZLA, but nothing else.

Now a few words from Don L3222. He finds conditions for DX at his QTH have been good. The improve of late, 20 mx has been wide open for the past three days to all parts of the globe, whilst 15 has had several good openings. However, the most pleasing feature was to have a good opening to the States on ten last week. Reception was possible for only about an hour, but it was really fine while it lasted.

He has just returned from a trip to Sydney via Jervis Bay, during which time a short visit was made to the VK3 rooms at Crews Nest. Prevailing circumstances made it impossible to stay more than a few moments, in which time he met Barney Smythe, Tony Patterson and renewed acquaintances with Tim VK2ZTX. The rooms are a credit to the Division and no small measure of its work has been, and is being, done by the S.W.I. Group. Barney Smythe, who, like Don, is a P.M.G. type, has held office in the S.W.I. Group for several years in various capacities. This year he is assistant secretary of the VK3 Divisional Group Disposal Committee, also Council liaison officer, vice-president and QSL officer to the S.W.I. Group. The Group is also represented in Divisional activities by Tony Patterson as treasurer of the S.W.I. Group, and office as Bulletin editor for the Division and is manager of the clubrooms.

DX 7TRKAA is still going strong. Don't pass over UK2KD as he is one of the big numbers of Russians. He is on Frana Josef and is a separate country. Heard in Albany on 14 mc. last evening on 14 c.w. Note SUTAX is on 14 s.s.b.

Well, chaps, that's all we have for this month, 73, and best of DX, Robert L3078.

DX LADDER FOR JUNE 1962

	Countries	Zns	S.s.b.	W
	Conf.	Hrd.	Conf.	Hrd.
E Trebilcock	101	249	37	149
D Granley	101	249	37	149
A. Wescott	94	158	31	33
M. Hillard	67	225	31	180
R. Cox	61	113	1	122
C Abernethy	32	71	28	—
N. Harrison	32	50	22	—
P. Drew	31	178	—	—
P. Fields	30	123	—	—
L. Thomas	17	123	16	8
J. Jenkins	10	—	—	—
H. Burger	6	185	5	1

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Call	Cor. Add.	No. Contr.	Call	Cor. Add.	No. Contr.
VK4HD	37	8	VK4PU	35	4
VK4ZB	36	7	VK4HR	4	3
VK4ZAE	39	6	VK4RQ	5	3
VK4ZB	39	6	VK4RQ	5	3
VK4ZB	39	6	VK4RQ	5	3
VK4ZB	39	6	VK4RQ	5	3
VK4ZB	39	6	VK4RQ	5	3
VK4ZB	39	6	VK4RQ	5	3

New Members:

VK3BQ	23	3	VK3ZGZ	26	2
VK7LT	34	3	VK5ZZ/T	21	2
VK3FV	23	3	VK3ZGZ	26	2
VK3FV	23	3	VK3ZGZ	26	2

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

FACTS

Editor "A.R." Dear Sir,

To comply with the Editor's request in his P.B. to the Correspondence in May A.R., and the requirement by VK3BG "only facts convince me," may I be permitted to reproduce verbatim, a section of my letter dated 18th Feb. '61, which fell into the "correspondence closed" category. It reads, "The writer 'guesstimates' that conditions were fair to good for the period. Do I believe him or my friend, the Disurbance Forecaster at I.F.S. Sydney? His records show that November was disturbed and in the middle of the month, lasting for six days, one of the most severe magnetic storms for a number of years occurred. There were also two cases of the 'recurrent' type of disturbance, the only week-end being unaffected, was 18-20 November."

The severe disturbance of November '59 is still referred to in Lonscape's diary. You will remember that VK3BG's observations were for week-ends.

In April '52 "A.R." he makes the claim 'His friends in the Arab world operate where they wish'. How true. The recent disturbed ionospheric conditions have forced many com-mercials, at times, to abandon r.t.t.y. and revert to straight c.w. transmission and of course this in turn identifies him. I don't recall what—two of the stations operating in the Amateur Service band of 14 Mc. used Arab country call signs. They were below 14.100 Kc.

—F. T. Hine, VK3KL

VICIOUS CORRESPONDENCE

Editor "A.R." Dear Sir,

Everybody is entitled to express his thoughts and the more contentious they are, the better it is for us all. The other vicious and sarcastic passages in recent letters are not becoming to their authors. There is an alarming tendency on some individuals to fail to keep silent on the point and argue the case only on its merits, using facts known to them plus their own ideas.

If we think an author's views are "biased hogwash," "ridiculous as his previous ones" and that his head remains under its customary sand-dune," we should treat him with ignore and leave the space available to others to deal with new points. Ideas have to gain support to be introduced as the value of anybody writes indicating their approval, the silence shows contempt or neutrality. I feel a letter of disagreement is only necessary when others have written of approval.

So please let us not be so offensive in future and try to observe the ethics of gentlemen, even if we cannot have a gentleman's agreement.

—Ormond Guy.

GOOD MUSIC

Editor "A.R." Dear Sir,

Through your columns I should like to get in touch with members interested in the reception of good music, particularly through v.h.f. I'm broadcasting I think there must be quite a number of Home or Listeners throughout Australia, who after reading the overseas magazines, feel that in this country we are lagging badly. To show what can be done on 88 megacycles, please the use of WBSKY who receives musical programmes perfectly at a distance of 200 miles from an f.m. station in Kansas City.

As most people know, f.m. programmes are received without static or fading and this is true so on the medium wave band with 30% and 2BL, 30 miles from Gosford. On 20th June last a step backward was taken and the static in the foot of the f.m. band was left to make the present total zero. Letters with comments on the above will be greatly appreciated if sent to this address.

R. L. Gosford,

3 Mason's Pde., Gosford, N.S.W.

VHF NOTES

(Continued from Page 38)

ceived. A welcome visitor was Den TDK, from the north. Bryan also delivered an excellent lecture to the general meeting on a transistorised v.h.f. E.d.o.

39 Mc.: No band openings reported, however many opportunities may have been missed through low activity. A few odd VK3 signs heard and some commercial harmonics—that's all. Most local activity is, however, on this band, but TZAY, who could be relied upon to supply a contact a day, has forsaken the game for flying.

144 Mc.: TZBX operated from Flinders Island during May. It is interesting to see his coverage. When 7LZ and TPF operated from Mt. Barrow (1300 ft.) recently, nothing was heard of them in Hobart—listening at the wrong time, no doubt, however, Channel 3 now operating from Mt. Barrow puts very little direct signal into Hobart (1100 miles away)—only a signal reflected from Mt. Wellington.

The Athol Johnson Memorial Contest, held annually to foster portable-mobile activity in VKZ, was won this year by TZBX (he seems to be the only one mentioned this month). Most of Bryan's contacts were whilst mobile, so it seems the rules are at last reasonably thought out. We are still trying to get more stations interested in this contest.

Preparations are well in hand for Oscar II, probably by now in operation. Peter TPF has been appointed an Oscar Co-ordinator and is keeping interest high. We are hoping for quite a few log returns this time.—TZAO

NORTHERN TERRITORY

Not much news to report from VK8 this month. April 12, worked JA6ASW and JA-SCDL; 14th, HLKA and tv. very strong, no JA; 18th, heard JA working VK6AU; 24th, heard JA8, 23rd, good JA opening around 3 p.m. VK8 and VK3 heard; 1st May, worked JA8 and JA3.

Had to off the air between 16th and 25th, putting a QBS/300 in final: can now run about 150w. input. Am running along with VK8 transmitting on 50.4 from 5.30 to 4.45 E.A.S.T. and listening from 9.45 to 10.6 E.A.S.T. Would also like sheds with North Queensland. That's about all for now, hope to have another VK8 2nd soon, in Darwin. 8AU.

PAPUA

April opened quietly on 50 Mc in Papua, with BNW, SCK, SAU and GZBV (just back from leave) active. On 1st, JAI was worked at 1950 hrs. SAU, JA8, JA3, JA2, JA1 on 8th, and again on 11th from 2000-2200, but no contacts were made. A good opening to JA on 12th between 1745 and 1830 hrs when JAI, 3 and 5 were worked. More work on JA heard between 2000-2100 hrs. On 17th, JA8 and 3 worked at 2025. 18th, nine JAAs worked by SAU 2020-2130. JAAs 1, 3 and 5. Excellent openings on 23rd to JA when at least a dozen stations were worked by each of SCK, BNW and SAU, the band being open to JA from 1648-1800, then from 2000-2215, usually from 2200-2400, with most signals peaking 59 dB. JA8WS worked at 2215; 20th, JA8JBE worked at 2050; 21st, JAI worked 2050. At 1850 hrs, on 24th, two HKAs heard in QSO on 50.3, peaking 58, much frantic calling on phone and c.w. did not obtain a QSO. 27th, JAI worked at 1835. On 28th, a station with a American voice was heard on 50.03 Mc, beaming N.E., but unidentified. On 30th, VKANG worked by SAU on band scatter with beam pointing to KCH at 1025, R4 RS both ways. In all, a most interesting month here on 50 Mc.

GZBV back from leave, now has a 4 el. yagi in operation and is looking for DX. No activity this month on the other v.h.f. bands. Incidentally, I hear by the grapevine that SAU's signal was heard during the month at Batchelor VK8, but no date is known. However the beam was pointed in that direction on several occasions.—SAU.

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FEDERAL AND DIVISIONAL MONTHLY NEWS REPORTS

(SEND CORRESPONDENCE DIRECT TO DIVISIONAL REPORTER NAMED AT PARA. END)

FEDERAL

NEW CALL SIGNS (JANUARY)

VK— New South Wales
2AW—B. Dale, 18 Robinson St., Wollongong.
2UN—A. H. F. Nicks, 5 Avoca Rd., St. Ives.
2ZJZ—R. C. Kichard, 21 Cowan Rd., Mount Colah.
2ZPB—P. W. Campbell, 3 Earle Ave., Ashfield.

Victoria

3AK—B. J. Wooten, 8 McKenna St., Avondale Heights.
3AR—R. C. M. Grimble, Station Laharum, via Horsham. Postal: Private Bag, Horsham.
3AW—L. G. McClellan, 15 Holloway St., Newport.
3GL—J. T. Deane, 101 St Stanley St., The Basin.
3RE—R. C. Bartlett, 40 Mowbray St., Wertheim.
3YB—R. B. Babb, Elmo Rd., Montmorency.
3ZNB—A. J. Hyslop, Station "Merella," Anderson. Postal: C/o Railway Station, Anderson.

3ZNH—P. J. Lawler, 50 Mollison St., Dandenong.
3ZNT—F. G. Storey, 407 Stephansons Rd., Mt. Waverley.
3ZOB—T. L. E. Floyd, 43 Tibrockney St., Highgate.
3ZOL—P. J. Gleeson, 518 Racecourse Rd., Flemington.
3ZMX—E. D. Buck, 363 Gooch St., Thornbury.
3ZMY—A. Camp, 100 W. St., St. Kilda East.

Queensland

4AE—J. C. Treby, Station: 8 Coyne St., Kirra; Postal: 24 Inala St., Tugun.
4SB—J. S. Strudwick, 13 Fowles St., Roma.
4ZGN—N. Scott, 31 Barnett St., Sherwin.
4ZJM—J. A. Mackay, Station: 64 Mill St., Gordonville. Postal: P.O. Box 173, Toowoomba.
4ZTC—A. J. Crane, 33 Morley St., Toowoomba.

South Australia

5IK—J. N. Cousins, 3 Woodroffe Tce., St. George.
5WB—E. W. Blake, 134 Yorkton Rd., Ellipsis Beth Park.
5ZBP—A. J. Henson, 618 Seaview Rd., Grange.
5ZDP—D. J. Seadman, 13 Jervia St., Torrens.
5ZER—D. G. Aslin, Station: Princess Highway East, Mt. Gambier. Postal: C/o P.O., Mt. Gambier.
5ZOH—B. G. Hines, 49 Hughes St., Unley.
5ZIB—J. S. Brown, 5 Indarra St., Taperoo.
5ZIC—I. R. Clayton, 1 Payneham Rd., St. Peters.

Western Australia

6ZDE—B. A. Cook, 18 Pier St., East Fremantle.
6ZDP—R. Parks, Lot 31, Canada St., Delcelle.
6ZDF—H. Farney, The Crescent, Maddington.
6ZDX—J. L. Orr, 21 Sealy St., Doubleview.

Northern Territory

6TA—G. Cole, 8 Congreve St., Fannie Bay, Darwin.
6ZV—O. C. Winterton, 3 Kingston St., Parap, Darwin.

NEW CALL SIGNS (FEBRUARY)

VK— Australian Capital Territory
1AW—J. A. Weddall, 1 Buchanan St., Narrabundah.

New South Wales

2AD—A. Dawson, 22 Thurlow St., Redfern.
2HE—L. W. Louitt, 3 Greenhills St., Croydon.
2GB—E. W. Birdsell, 23 Ebley St., Bondi Junction.
2GN—E. J. Mulholland, 18 Queen Victoria St., Sydney.

2AOP—W. Parry, 7 Dalziel Ave., Panania.
2AOQ—M. S. Hodgson, 3 Darling St., Chatswood.
2AWT—N. J. Watling, 115 Windsor Rd., Richmond.

2AXW—G. Whitehead, 1 The Strand, Gladesville.
2ZCJ—C. Ellis, 12 Chapman St., Gymea.
2ZCK—R. C. Slip, 14 Parry St., Ryde.
2ZDN—D. M. Mills, 21a Johnstone St., Cardiff.
2ZGE—G. MacPherson, 4 Russell St., Woolahra.

2ZHW—G. E. Watts, 2 Eadale Place, Arncliffe.
2ZNL—R. N. Lee, 85 Point St., Bulli.
2ZTF—W. Watkins, 79 Alabarb St., Blacktown.

2ZWC—C. W. Camp, 24 Clunwilliam St., Chatswood.

Victoria

3ZQJ—R. J. Pether, 33 Older St., South Caulfield. Seid, 583.

Queensland

4GJ—G. J. Griffiths, 2 Wills St., Townsville.
4ZKP—K. M. Pitcher, 34 Blackheath Rd., Orley.

South Australia

5CR—L. K. Catford, 23 Ranger St., Elizabeth Park.
5FY—C. W. Hope, 13 Alexander St., Elizabeth Park.
5ZGL—L. G. R. Godfrey, 43 Charles St., Norwood.

Western Australia

6ZDJ—K. L. Miller, 1 Freeman St., Melbourne.
6ZDI—R. Forde, 96 Ostrum St., West Perth.
6ZDO—G. A. Griev, 95 Canning Highway, East Fremantle.

FEDERAL QSL BUREAU

A further change in the A.R.L.I. QSL Bureau schedule is 76/3K. See Diego DX Club, P.O. Box 6102, San Diego 6, Calif.

Projected visits to Australia by U.S.A. Members include: W6YF, John, May 1957; W6YQA (YLF), Flo Majorus, and G4M, March/April 1957, and my old friend J. Scarlett, W2CC, and YL April 1957. All proposes including VKs, 4 and 5 in his itinerary as well as a longer stopover in Melbourne.

Call signs, etc., of the 1963 Antarctic personnel notified to date are:—

Wilkes—
VK0DS (VK3ZIE) D. Seadman (Vic.).
VK0JO, J. Cohen (Vic.).
VK0KT, Ken Tate (Vic.).
VK0CG—C. Gorman (N.S.W.).
Davis—
VK0AM (VK5TM), J. Mollie (N.S.W.).
VK0DW, D. Ward (S.A.).
Marcuria Island—
VK0BO, B. Hill (N.S.W.).
VK0JR, J. Miller (N.S.W.).
Mawson—
VK0JW, J. Watts (N.S.W.).
VK0JG, J. Ross (N.S.W.).
VK0BW, B. Woodbury (Vic.).

As no QSL manager arrangements are known all cards for the above should be routed care VK0JR.

It seems that nobody reads these notes any more. Plaintive and repeated bleats for info. on the following stations have fallen on barren ears. VK0MP, VK0SP and VK0ZP and the suspected pirate, CR18AB. Any info. at all would be appreciated. Likewise any known dope on R.A.P. Beecher Type 229 ARIA.

Dennis, G3M3J, currently radio operator on the Orion, has been a frequent visitor to Melbourne when that vessel has been in port. He has managed to clear some news from Japan. Box G6BQ (top man top band), of Greenveend, while in Melbourne. Dennis has no Ham-band rig on the Orion, but complies getting the sea a rest shortly and taking a land-based job with C. & W—maybe ZDK—who knows? A current burst of DXposition activity during April/May has caused pile ups on the portion of 14 Mc. These include W4GDS and associates at Baja Nuevo and Swan, fiddly W4YKZ at YORUS/ACS in Hawaii. Danny Well cooling his heels at Papete under FOBAN, and Gus WARPED with his huge Indian Ocean and African Hilarity under various call signs.

Ray Jones, VK3RJ, Manager.

NEW SOUTH WALES

HUNTER BRANCH

The visiting lecturer at the April meeting of the Branch was Harold VK2AAH. He spoke about 44 loop aerials and in particular described a unit of his own design, with which he has had considerable success in 7 Mc. Hunts. A well chosen selection of slides accompanied the lecture. At the conclusion of which Harold described the now well known, to him, "shelf bracket" antenna, so called because it resembles a shelf bracket. This does wonderful things on 144 and 146 and is ideal for fitting on any car. See Harold for all the details.

The meeting also heard the views of one councillor on the Amateur's position in present

day affairs and the resulting discussion was healthy and to the point, a very good thing indeed.

The thanks of all Branch members go to Harold VK2AAH for a really good meeting. Among the 16 members, six associates and two visitors present were Les Z2GB, whom we have not seen for some time.

Local v.h.f. activity is running at an all-time high and as proof of this members here their names for an 8025 Kc. crystal order. Apparently it is possible to get these crystals for some small charge and, as this frequency, when multiplied, happens to be the local calling frequency on 2, considerable interest has been shown by those interested in v.h.f.

Usually the 80 mc. broadcast on Monday night is no 8075 but 3525! Any interested reader who wishes to know what all this is about, ask anybody else, all the others know.

A well known member, while hurrying to the shelter of his car after leaving the last meeting, was seen to bend very close to the ground as if to study it more closely. This same member is reported to have come into violent contact with a chain dividing two sections of the College grounds recently. As a Sydney visitor also re-nacted this performance it has been suggested that a suitably inscribed plaque "Molesworth-Otly Walk" be erected in the vicinity. Your correspondent welcomes members' views.

Tony, who listens to 2NX with one ear all the time, has at last received his call sign. Rumour has it that he may be heard first on 2NX to take a listen for 2ZCF if you have the gear. Tony's QTH at Whitebridge should be a good take off spot for Sydney as well. During the month of January a number of new arrivals at the Thompson QTH out by the lake. Firstly, twin harmonics (congratulations Jim) and then a new Collins rc. (congrats again). More congratulations, this time to Bill 2XT who came in first in the Urunga 144 hunt. A good time was apparently had by all and it was the most heartening thing to find the local boys from their home QTH in the scramble. Special thanks from the Urunga scramblers to Ron 3ASJ putting in a fine signal from Cronulla and Bob 2AA who put in a very reasonable charge, ready cut chassis tops for both projects. There should now be no reason for local members not being able to transmit and receive on 2. Why not make it a winter project?

The next meeting of the Branch will take place at the home of a visitor in 2NX on 21st castle at 8 p.m. on Friday, 18th June. Watch the Bulletin and listen to 2WI and 2AAX for details of assembly place. The next social meeting will be at Bill Hart's lavatory. Come on, the fourth Wednesday, which is 27th June. Regular 3 m. for hams are being arranged for 24th and 25th June. The 27th Hunter Branch broadcast which is at 1800 E.S.T. each Monday on approx 3575 Kc. Call backs are taken firstly on 50 and then on 40, while call backs are taken by either Gordon Z2SG or Stan 2AYL, 73, de 2AAX.

CENTRAL COAST ZONE

The Gosford Radio Club extends a welcome to Z2GM and 2ACU who have just arrived in our midst. Geoff was formerly at Ungarie in the Central West and now indicates a powerful drop of 4.5 on 24 Mc. from Queens. Geoff's 2ACU is now at West Gosford (high into 2AI) and has an HT31 and NC230. He says he has been in the 24 Mc. band for some time but that's not the way we look at this pleasant watering place. 2EE now gets out well on 80 mc, having lengthened the antenna. Understand he had a break from house building to



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Attractive design, Kew type ST-20-G
75/- each + tax 25%

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7/010, five colours available. 100 ft.
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For coupling to 600-ohm line.
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£8 each + tax 12 1/2%

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retracts to 1", and can only be ex-
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25 mA, 6.3v. at 1.7a.

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240v. Prim., 385v. a side
Sec. at 150 mA., 6.3v. at
2a., 6.3v. at 2a., 5v. at 2a.

60/- each + tax 25%.
Plus Pack and Post. 3/6.

240v. Prim., 410v. a side
Sec. at 180 mA., 6.3v. at
4a., 6.3v. at 5a.

100/- each + tax 25%.
Plus Pack and Post. 7/6.

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4 only type 931—4,500 ohms U.L./2 or 8 ohms, at 20 watts 80/- each + tax 25%
3 only type 929—4,000 or 2,500 ohms S.E./15 or 2 ohms, at 10 watts, 50/- each + tax 25%

Packing and Postage on any of above, 5/-.

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8,000 ohms Primary to 2 ohm Voice Coil, 20/- each + tax 25%
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renovate the modulator. Ernie insists that as he is retired, of course, I think it will be a while before he joins the daytime net on the Senior Citizens Band (7 Mc.).

Reg 2A1 is still rather elusive and recently spent four days at Walcott. The KWMA is put to good use when time allows. John 2B3 now has a good signal on 80 mhz using a GSRV receiver and modern antenna. The other bands operating 7 Mc and 14 Mc. Incidentally, there are about seven or eight active two-metre stations in this district. 2A3A is on this and other bands from Tomby. PHU 2XZ has plans for a beam on 14 Mc. but at present uses a GSRV antenna to his HT37 and Drake 2A.

Ken 2AFH, who can listen on 144 Mc, will soon be transmitting. Frank 2AFZ, nearby at Peats Ridge, is now quite active on two. Major 2RU works this band and participates as a mobile in the 2 mhz field days when it's raining. A 312 tube puts out a good signal. Wally 2AFH from Terrigal has a side-band rig under construction with help from Peter, his second op, and technical advice from Joe 2JR.

Alce 2AAK has just started on two from Kumura. It's on top of a hill and Sydney stations pour in but local contacts are more difficult. It seems. The club has had two very fine lectures recently in Les 2ZBJ of Canberra. A 312 tube puts out a good signal. Bob, g.d.o.s. I wonder how many are now equipped with calibrated g.d.o.s. for 3-30 mc. range. I was surprised to see in the literature his low-suffering 305 mhz set. Incidentally, wiping contacts to a split-stator condenser can bring much unhappiness on the 10-30 mhz range and simple 1000 ohm resistor end of the shaft bring a miraculous cure. Cheerio, DON.

BOORAGU HIGH SCHOOL RADIO CLUB
During the opening of the Radio Club at Narrandera High School, 2ATZ called in and gave the boys and girls another contact on 40. This apparently reached the ears of the A.B.C. and we gained some free publicity on the news broadcast. Thanks to Pierce 2A3K, the High School Radio Club were given a good deal of publicity at the Convention and this also reached the television news.

During the month several club members from the junior section sat for the written exam, for the elementary certificate and the practical tests are being conducted each Friday. Three members have already satisfied requirements in the written section and nearly all the group has done well in the practical tests.

The Superintendent of Police has promised us a visit to the VEC in at Warburton early in June and we are all looking forward to this. The junior certificate written examination is to be held on June 18. Please listen for our club station, 2ATZ, at 0800 at 0815 G.M.T., Tuesday and Friday on 40, 75, 2ATZ.

VICTORIA

MAY GENERAL MEETING

Only about 35 were present at the May meeting of this Division. After routine matters had been dealt with, the Secretary moved that Max 3ZS be made an Honorary Life Member, in recognition of the many years of service he has given to the Institute. There was a rush of acclamations to the motion which was carried unanimously. It appeared Max was the only one present surprised by the motion, and was obviously deeply moved when he thanked the meeting.

Only three new members for this month, namely Jas Brown, 3ZJZ, as a full member, and T. Armstrong and D. James as associates.

WILLIS INDUCTANCES

B. & W. 3002	1" dia.	8 t.p.i.	5/3
" 3003	"	" 16 "	5/3
" 3006	"	" 8 "	6/3
" 3007	"	" 16 "	6/3
" 3010	"	" 8 "	7/4
" 3011	"	" 16 "	7/4
" 3014	"	" 8 "	8/5
" 3015	"	" 16 "	8/5
" 3018	"	" 8 "	18/5
" 3019	"	" 16 "	10/6

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The Federal Councillor, with assistance from the Secretary and 3ZS, gave a resume of the Federal Convention, with emphasis on the humorous aspects.

The evening was topped off with a lecture by Michael Osborne, who spoke on the theory of tunnel diodes. This is the second theoretical lecture by Michael in recent months. It is to be hoped he can be persuaded to devote an evening to showing us the practical applications of the gadgets he has described.

At the next meeting Mr. Little, from the Physics Department of the University, will demonstrate the equipment they are using for Direction Finding their research balloons. Members will recall that the Institute assisted in the initial d.f. tests with these balloons.

MAY COUNCIL MEETING

The most interesting items discussed included the W.I.C.E.N. circular. So far 60 members have indicated their willingness to participate. In due course, all those interested will receive further details. There is still a large amount of detail to be worked out, but at long last we have official recognition and something to work for.

Project Oscar needs all the support Amateurs can give. Bill Smith has been appointed VEC co-ordinator. He will welcome any enquiries or offers of assistance.

The Moon-bounce project is in trouble. A new site has to be found where we can erect a 20 ft. diameter antenna. Offers to Michael Osborne please!

perpetual grin. But did you see the news item about a recent Sunday? Our usually debonair Len saving a shirt from his shop window. No grin this time, but then who could grin if pulled out of bed at 3 a.m. because a car decides to swing through a plate glass window. And I bet that dressing gown would look good on Kodachrome!

Now we have the "payola" in, have you ever seen an hour listening over the radio to find out how others spend their time when they're not "hamming" or watching t.v.? Topics heard discussed recently in the dinner photography, the formation of an eastern suburbs radio club, a game of chess played via 2 mhz, host building, and sometimes radio.

Now, the subject of chess, did you see Hancock's half hour when he played an Amateur Operator? As an operator, he was an Advisory Councilor's night rider. The dinner, no doubt, were lost to the general public, but the script was undoubtedly written by somebody closely acquainted with the hobby.

Think back, how often have you mislaid your pencil when you most wanted it, hunted it out only to find it needs sharpening. If you say you have never grabbed a hot lead and said "this is mine" in expression, indeed, nobody will believe you.

Hope you have read your W.I.C.E.N. circular which related to the Civil Defence. It is getting some real recognition in official circles, let us show that Amateurs are of real use to the community. The W.I.C.E.N. is a good thing, without a doubt. Believe me or believe me not, as you wish, but the hunters still find it.

NORTH EASTERN ZONE

During the month of April most of this zone's active members were heard working the bands. Some on 2X SIG (ex 3ZKW) came on early in the month and his contacts with Y, K, W, P and DL had caused considerable unrest amongst people. 3AWT was talking about but a 3 mhz rig earlier in the month but has been a.w.l. 3AOB recently begot himself a spouse and the poor woman soon learnt what being married to an Amateur meant. He took his portable with him for the Elton honeymoon. From that location he was heard many times. I am sure other zone members will join me in expressing hopes for all that is best to Ted and his lady.

Understand that 3AHO is off to Wallace Isl soon for a DX-pedition, these cow-cockles! 3ALP has conducted a quad and is now pointing the bone at several of us re assistance with its raising. 3ACK still fiddling with his star-zigging machine and during his rare calls, discusses slow motion driver, prisms, mirrors and washing machine parts in lieu of tubes, condensers and tuned circuits. 3ACD has formed the nucleus of the Shepparton High School Radio Club. The Yarrawonga Radio Club, under the guiding hand of 3ZU, offered several candidates for the recent exam.

The two-stroke motor which 3AUL uses to charge his batteries was playing up earlier this month. He has since drained off the surplus water with good results, because with higher voltage he works a few more 1A2s.

As decided at the Convention, hook-up overs have been generally maintained at two minutes. However a few exceptions have occurred and 3AUL, the zone co-ordinator, has been urged to bare the fangs at them. Topics such as a some certificate, c.w. practice within the one-day convention for 3L have recently been discussed at meetings. The variety of amounts of enthusiasm or disdain. The idea of a two-day convention was well received as

STH. WESTERN ZONE, W.I.A.

and

GEELONG AM. RADIO CLUB

CONVENTION

9th and 10th JUNE, 1962

Business meeting on Saturday afternoon, Dinner at 6 p.m., followed by a Film Night. Sunday will have a car trial transmitter hunt, picnic lunch and the usual get together.

Fuller Details from VK3ABE, 22 Leonard St., Belmont, Geelong, Victoria.

The agenda items from the Federal Convention has all reviewed and discussed. Council voted in favour of ratification.

As at the first of May, the Victorian Division had 12 male members, 204 full members, and 116 associate members. The Publicity Officer will be making a drive to increase membership.

Council supports the idea of using G.M.T. in Amateur Radio matters, with the exception of Council meetings. Some members objected to meetings lasting into the afternoon.

GENERAL NOTES

Over the years ingenious ideas for hiding t's have been thought out. Remember the couple with the 100 ft. Treasurers Garden? Well now the simplest idea even thought of has been tried. Wonder nobody tried it before. So delightfully simple—just don't turn the final op. If I didn't know better, I'd say this was a 3LN effort.

Now that Len is in this, he would be the one person I thought impossible to ruffle. In all the years I've known him, he has had a

it would permit of a dinner-dance for the ladies, games for the kids and fox hunts for the members.

Due to Scouting pursuits prior to and after Easter, I have had little time to meet around the bands to gather info during April. The urgency of other pursuits now being passed, some members who have the irresistible urge to look over their shoulders (metaphorically) expecting to find me, will, I, JAS.

EASTERN ZONE

Ken 32NK arrived back from VKZ where he spent his holidays near Sydney. Ken hopes to have his self-supporting tower up very shortly. David 30Y is spending some time on 88 Mc with some fruitful QSOs during the daylight hours when the band is open. All being well, Graham 3QZ will be going to England in June for several months. He has now all the bugs out of him s.b.s. rig with good results on all bands. Jim 3ZBV is doing out his new shack, so temporarily off the air. Bill 3JMI, now at Taralgon, is active on all bands, including a.m. on 143.08 Mc. Bill is constructing a.s.b. for the v.h.f. bands.

In case you were unable to attend our recent Zone Convention, Cliff 3AIT was appointed as our official call-back station to 3W1, assisted by Graham 3QZ, 3AQM, and to be backed up by any other listening member, when either Cliff or Graham cannot make it. Please do not forget, thank you.

Unfortunately I have spent the last three weeks out of the zone on holidays in the zone, meeting Gessios, Colac and Balaclava. So my news may not be complete. Trust everybody enjoyed themselves on the zone field day at Western Creek; our next family field day is to be held at Lakes Entrance on 4th November, 1962.

I want all zone members who have a 2 mhz rx to participate in Clear E.I. I have already handed out some reception report forms, so any without same, please contact me so I can forward you some. Only those who have a 2 mhz rx can be used, and these cover if you can only make several quick observations or constant detailed reporting. As only four reports were received in U.S. from VKZ last year for Clear E.I., very disappointing, we want this one to be a great success, so please do not let me down—remember the Kudos to you.

Alan 3ZNS, down at Anderson, is quite active now on 2 mhz. 73, 3ZCC

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UM0	10-Watt Audio	25/16/9
UM1	30 " "	27/12/6
UM2	60 " "	210/13/3
UM3	125 " "	212/1/9

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Wireless Institute of Australia

Victorian Division

A.O.C.P. CLASS

commences

THURSDAY, 2nd AUG., 1962

Theory is held on Monday evenings, and Morse and Regulations on Thursday evenings from 8 to 10 p.m.

Persons desirous of being enrolled should communicate with—
Secretary W.I.A., Victorian Division, P.O. Box 36, East Melbourne (Phone: 41-3538, 10 a.m. to 3 p.m.), or the Class Manager on either of the above evenings.

MOORABBIN & DISTRICT RADIO CLUB

A very full and interesting month for members of that active bunch from the City of Moorabbin. The 80 mhz tx hunt at the beginning of May was well attended and we were pleased indeed to have Arthur 3AUL—the King of Smoke—with us for the evening. Don't know how 3AUL felt about it all, but we were very glad to see him and the active participants in his making progress through the Big Smoke. Peter 3APD finally found the nasty little hidden tx in a bush under the junction of a mass of power lines. These last mentioned lines put everyone else right off the track to such an extent that Peter was the only one who found it and was thus the winner.

The next meeting night we were treated to a couple of very interesting films picked out for us by Laurie 3CN. Where does this chap get such good flicker fare? Same high stand-

ard every time. One film was on the 1961 Farnborough Air Show, the other being on the way the B.B.C. gets its "telly" to the popu- lace. Having patrolled Laurie on the back for the way he chooses his films, I think he must now be gently chided for his lack of air time. It appears that he has (temporarily) forsaken the tx for hi. st. Shows on you, Laurie.

Final fixture for the month was a social night at Hal Shirley's where a rumbustious time was had by all and once again our Treasurer, Peter 3CN, rubbed his hands with glee at the sizeable increment to the club funds. We laymen reckon we are in the mill lionsire class, but a professional accountant is harder to milk than a stone.

Perhaps for all of us the highlight of the month was a visit from John W8YU, John was the first American Honorary Member and being in Melbourne on business, wrote Stan 3TE, asking if he could meet the lads from Moor-

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5.500 Mc. T.V. Sweep Generator Crystals, 23/12/8.

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ALSO AMATEUR TYPE CRYSTALS—3.5 AND 7 Mc. BAND.

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abbin. As his visit didn't coincide with any particular club function, we organized a shindig at the QP of the JACQ of John's home. About 30. A most pleasant evening for a most pleasant bloke. Hope you get back to VK3 again, John. The Monday night club set at 8 p.m. on or near 3.8 Mc continues to be very popular. Your scribbles—how acts as control under the club sign of 3APC/P—has the uneasy feeling of a scribble. I hope you will be able to get to bed before midnight. 73, 3APC/P.

QUEENSLAND

Amateurs in Queensland during April were kept busier than the proverbial bees in this land of sunshine. The activities seemed to come at the one time again when mixed with a lot of holidays, the possessors of a lot of call signs were heard and seen. It seemed to many trying to have a rag-chew, on 7 Mc, in particular, that there was only a thread or two left after so many others had crowded the airwaves. The annual meeting of the Queensland General Meeting headed the list of "do's".

The Annual General Meeting of the Queensland Division of the Wireless Institute of Australia was held at the State Hotel, Brisbane, on April 27 at 8 p.m. with Peter 4PZ in the chair. During the proceedings, Vice President Les 4XJ, who had incorporated other councillors' reports that had been submitted.

His report included a suggestion that the new Council year should be active by April instead of in May as at present. 4PZ said that he could see no virtue in the gap existing between the W.I.A. and the W.A. In February and the start of Council activity.

The report said that in the year, the QSL section had worked extremely hard. One hardly knew it existed. Despite advances, many Amateurs did not claim QSL cards and they had to be returned to the sender. During the year, a total of 4,600 cards were sent, at a cost of two-thirds of a penny, but there are about 4,600 cards on hand ready to send.

Members of the QSL section should show four life members, 303 full members, and 48 associates, making a total of 303, a net increase of 17. The proportion of licensed members of Queensland is licensed W.I.A. members was unsatisfactory.

The meeting also had reports from 4KLB (Trustees AOC (Federal Convention), and 4EB (Disposal).

The ballot for this year's Council resulted in the following members being elected: 4PZ, 4XJ, 4ZB, 4ZK, 4ZG, 4AW, 4C, 4WX, 4VM, 4BA, 4ZB and 4ZG.

The order of business was interrupted to allow the ordinary monthly meeting to be held, and the annual meeting was closed at 10.55 p.m.

The Division Convention at Alexandra Headland on April 28 was a little a show, and we hope you can read about it in separate story submitted for this edition of "A.R."

The April Council meeting held at the QTH of Peter 4PZ, was a most interesting affair. It was a frequency other than 7105 Kc. he was used during an emergency. This was one frequency used and operated by the Queensland Rivers area early in April. The frequency is the intrastate hook-up frequency for VK4.

The V.H.F. boys who took part in the Senior Scout Rally, to ask the boys to give them a special pat on the back for the good job they did. A letter of thanks from the venture was sent to all the boys. The V.H.F. boys were the best ever. The venture received press and radio publicity, and mention was made of the V.H.F. We hope more will accept the invitation by the Boy Scouts to do a similar job of service at next year's venture. Also, Senior Scouts aged between 15 and 18 are also being asked to help.

Alf is one of a number of h.f. fans in the Brisbane area who are learning their two and three letter call signs. They are rock hunting for crystals to put them up (or is it down) with the v.h.f. boys. Among the others who have been changing their call signs is BZ, and that was 30.4, and George 4GG, Bill 4WS and Les 4EB. The Oscar II project has had several soldering iron accidents, and the second accident should be reports of its passage above VK4.

In closing, we will predict that this month's "A.R." will be the most widely read for years. Why? Didn't you notice last month's 3.8 Pansy (frustrated with the Post Office and feet) has decided to put down his acid pen, unfortunately for ever, but for a month while he lingers off and on around the country side on his hols. Wonderful news like that spreads around the place from VK3 to VK3 like wildfire, the best possible circulation booster. 73, Don.

ALLOCATION OF CHANNEL 6

The announcement by the P.M.G. (Mr. Davidson) on May 8 that the allocation of television Channel 6 for Melbourne and Brisbane is confirmed, deserves the strongest protest ever made. The P.M.G. has decided to allocate Channel 6 to Melbourne and Brisbane. Amateurs in these cities have to give up operating the 50 Mc band, another band matched from the 30 Mc band. The P.M.G. has decided Channel 6 covers from 45 to 53 Mc, leaving only 8 Mc free, and Amateurs are asking how they can possibly operate on 8 Mc. The P.M.G. is to 10 watts against 100 kw. from a t.v. station on an adjacent frequency. This VK4 boys are already up in arms and intent on making their views known. Here is the chance for the W.I.A. to show what a strong voice it has.

BUNDABERG CLUB

At the monthly meeting on April 8, club members were fêted to a film evening which was greatly appreciated and enjoyed by all. The evening was held at the home of one of the club and students and licensed members alike are finding them very enlightening and of great interest.

The President (Les 4XJ), who chaired the meeting in the absence of president Frank 4UK, conveyed the club's congratulations to John 4J, who has just received his full Amateur licence. Jocelyn is the XYL of our secretary-treasurer (Rusty 4JA), often heard these days on the 40 Mc band.

Our new mobile, which has just been installed a maritime mobile in his new boat, and members are looking for calls. Les 4XJ contacted the club's first Morse instructor, Alan 4AD, who has just received his licence, and his ex-pupils were delighted to know he is back on the air, and will be looking around for him. 73, 4MZ.

CAIRNS

Six mc activity still the mainstay for the last month with a few openings to JA land. Bill 4ZWG worked a few, but I can only claim half a contact. A JA3 answered my CQ but that damn rc of mine distorts on weak signals. I have been asking for a JA3. Rick will have to look to his laurels as he can no longer claim the title of the district's best JA3. I hope he will work any DX on 6. Very pleased to hear that the VK3 boys are tuning up as high as 30.7 Mc to see if they can hear us, but we can't hear them. I heard Jim 4CZG trying please VK3.

Heard that Harry 4KB is paying a visit to the Cairns area. He is planning to make a date to meet Harry at the railway station at 11 o'clock at night and that Harry would recognize as the fine, upstanding athletic gentleman with a strong sense of duty and a large head under his arm. Knowing Canada as I do, Harry would better watch out for what he has got for that forest. Don't dip it on your clothes for goodness sake, for he brews it himself.

Over the Easter holidays I visited Innisfail, spending most of the day eating Bob 4TK out of the house and home and eating about him. Radio, I don't like going to Bob's place though for his shack is so tidy and my XYL insists that mine has got to be cleaned up after she gets that forest. Don't dip it on your clothes for goodness sake, for he brews it himself.

Apparently a few of the northern boys went bush over the Easter. Ross 4RO calling me from the bush. He is a very good fellow. Wonder what sort of a place that is? There is a place called Paradise in Adelaide, but I don't say much about it. I have a large head under his arm. Knowing Canada as I do, Harry would better watch out for what he has got for that forest. Don't dip it on your clothes for goodness sake, for he brews it himself.

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about beams to go for hunting and he would dive into the pile of gear and exhibit a beast that element. Beams and the claims is just the berries. After a night, last saw him asking directions for Townsville on his way home.

Frank 4PK blew in from Ingham during the Easter break and it was good to see him after being so near, yet only knowing each other's voice. Tried very hard to convert him to 8, but he seems to be stuck on this 144 Mc band. 73, 4ZW.

SOUTH COAST

For me, most of April has been spent travelling to and from VK3 Convention at Alexandra Headland, returning home, and then to the VK1 Northern Zone Convention at Urunga. At Alexandra Headland, the South Coast had representatives from 4CZ, 4ZB, 4ZC, 4ZD, 4ZK, 4ZL, 4ZM, 4ZN, 4ZO, 4ZP, 4ZQ, 4ZR, 4ZS, 4ZT, 4ZU, 4ZV, 4ZW, 4ZX, 4ZY, 4ZZ, 4AA, 4AB, 4AC, 4AD, 4AE, 4AF, 4AG, 4AH, 4AI, 4AJ, 4AK, 4AL, 4AM, 4AN, 4AO, 4AP, 4AQ, 4AR, 4AS, 4AT, 4AU, 4AV, 4AW, 4AX, 4AY, 4AZ, 4BA, 4BB, 4BC, 4BD, 4BE, 4BF, 4BG, 4BH, 4BI, 4BJ, 4BK, 4BL, 4BM, 4BN, 4BO, 4BP, 4BQ, 4BR, 4BS, 4BT, 4BU, 4BV, 4BW, 4BX, 4BY, 4BZ, 4CA, 4CB, 4CC, 4CD, 4CE, 4CF, 4CG, 4CH, 4CI, 4CJ, 4CK, 4CL, 4CM, 4CN, 4CO, 4CP, 4CQ, 4CR, 4CS, 4CT, 4CU, 4CV, 4CW, 4CX, 4CY, 4CZ, 4DA, 4DB, 4DC, 4DD, 4DE, 4DF, 4DG, 4DH, 4DI, 4DJ, 4DK, 4DL, 4DM, 4DN, 4DO, 4DP, 4DQ, 4DR, 4DS, 4DT, 4DU, 4DV, 4DW, 4DX, 4DY, 4DZ, 4EA, 4EB, 4EC, 4ED, 4EE, 4EF, 4EG, 4EH, 4EI, 4EJ, 4EK, 4EL, 4EM, 4EN, 4EO, 4EP, 4EQ, 4ER, 4ES, 4ET, 4EU, 4EV, 4EW, 4EX, 4EY, 4EZ, 4FA, 4FB, 4FC, 4FD, 4FE, 4FF, 4FG, 4FH, 4FI, 4FJ, 4FK, 4FL, 4FM, 4FN, 4FO, 4FP, 4FQ, 4FR, 4FS, 4FT, 4FU, 4FV, 4FW, 4FX, 4FY, 4FZ, 4GA, 4GB, 4GC, 4GD, 4GE, 4GF, 4GG, 4GH, 4GI, 4GJ, 4GK, 4GL, 4GM, 4GN, 4GO, 4GP, 4GQ, 4GR, 4GS, 4GT, 4GU, 4GV, 4GW, 4GX, 4GY, 4GZ, 4HA, 4HB, 4HC, 4HD, 4HE, 4HF, 4HG, 4HH, 4HI, 4HJ, 4HK, 4HL, 4HM, 4HN, 4HO, 4HP, 4HQ, 4HR, 4HS, 4HT, 4HU, 4HV, 4HW, 4HX, 4HY, 4HZ, 4IA, 4IB, 4IC, 4ID, 4IE, 4IF, 4IG, 4IH, 4II, 4IJ, 4IK, 4IL, 4IM, 4IN, 4IO, 4IP, 4IQ, 4IR, 4IS, 4IT, 4IU, 4IV, 4IW, 4IX, 4IY, 4IZ, 4JA, 4JB, 4JC, 4JD, 4JE, 4JF, 4JG, 4JH, 4JI, 4JJ, 4JK, 4JL, 4JM, 4JN, 4JO, 4JP, 4JQ, 4JR, 4JS, 4JT, 4JU, 4JV, 4JW, 4JX, 4JY, 4JZ, 4KA, 4KB, 4KC, 4KD, 4KE, 4KF, 4KG, 4KH, 4KI, 4KJ, 4KL, 4KM, 4KN, 4KO, 4KP, 4KQ, 4KR, 4KS, 4KT, 4KU, 4KV, 4KW, 4KX, 4KY, 4KZ, 4LA, 4LB, 4LC, 4LD, 4LE, 4LF, 4LG, 4LH, 4LI, 4LJ, 4LK, 4LL, 4LM, 4LN, 4LO, 4LP, 4LQ, 4LR, 4LS, 4LT, 4LU, 4LV, 4LW, 4LX, 4LY, 4LZ, 4MA, 4MB, 4MC, 4MD, 4ME, 4MF, 4MG, 4MH, 4MI, 4MJ, 4MK, 4ML, 4MN, 4MO, 4MP, 4MQ, 4MR, 4MS, 4MT, 4MU, 4MV, 4MW, 4MX, 4MY, 4MZ, 4NA, 4NB, 4NC, 4ND, 4NE, 4NF, 4NG, 4NH, 4NI, 4NJ, 4NK, 4NL, 4NM, 4NN, 4NO, 4NP, 4NQ, 4NR, 4NS, 4NT, 4NU, 4NV, 4NW, 4NX, 4NY, 4NZ, 4OA, 4OB, 4OC, 4OD, 4OE, 4OF, 4OG, 4OH, 4OI, 4OJ, 4OK, 4OL, 4OM, 4ON, 4OO, 4OP, 4OQ, 4OR, 4OS, 4OT, 4OU, 4OV, 4OW, 4OX, 4OY, 4OZ, 4PA, 4PB, 4PC, 4PD, 4PE, 4PF, 4PG, 4PH, 4PI, 4PJ, 4PK, 4PL, 4PM, 4PN, 4PO, 4PP, 4PQ, 4PR, 4PS, 4PT, 4PU, 4PV, 4PW, 4PX, 4PY, 4PZ, 4QA, 4QB, 4QC, 4QD, 4QE, 4QF, 4QG, 4QH, 4QI, 4QJ, 4QK, 4QL, 4QM, 4QN, 4QO, 4QP, 4QQ, 4QR, 4QS, 4QT, 4QU, 4QV, 4QW, 4QX, 4QY, 4QZ, 4RA, 4RB, 4RC, 4RD, 4RE, 4RF, 4RG, 4RH, 4RI, 4RJ, 4RK, 4RL, 4RM, 4RN, 4RO, 4RP, 4RQ, 4RR, 4RS, 4RT, 4RU, 4RV, 4RW, 4RX, 4RY, 4RZ, 4SA, 4SB, 4SC, 4SD, 4SE, 4SF, 4SG, 4SH, 4SI, 4SJ, 4SK, 4SL, 4SM, 4SN, 4SO, 4SP, 4SQ, 4SR, 4SS, 4ST, 4SU, 4SV, 4SW, 4SX, 4SY, 4SZ, 4TA, 4TB, 4TC, 4TD, 4TE, 4TF, 4TG, 4TH, 4TI, 4TJ, 4TK, 4TL, 4TM, 4TN, 4TO, 4TP, 4TQ, 4TR, 4TS, 4TT, 4TU, 4TV, 4TW, 4TX, 4TY, 4TZ, 4UA, 4UB, 4UC, 4UD, 4UE, 4UF, 4UG, 4UH, 4UI, 4UJ, 4UK, 4UL, 4UM, 4UN, 4UO, 4UP, 4UQ, 4UR, 4US, 4UT, 4UU, 4UV, 4UW, 4UX, 4UY, 4UZ, 4VA, 4VB, 4VC, 4VD, 4VE, 4VF, 4VG, 4VH, 4VI, 4VJ, 4VK, 4VL, 4VM, 4VN, 4VO, 4VP, 4VQ, 4VR, 4VS, 4VT, 4VU, 4VV, 4VW, 4VX, 4VY, 4VZ, 4WA, 4WB, 4WC, 4WD, 4WE, 4WF, 4WG, 4WH, 4WI, 4WJ, 4WK, 4WL, 4WM, 4WN, 4WO, 4WP, 4WQ, 4WR, 4WS, 4WT, 4WU, 4WV, 4WW, 4WX, 4WY, 4WZ, 4XA, 4XB, 4XC, 4XD, 4XE, 4XF, 4XG, 4XH, 4XI, 4XJ, 4XL, 4XM, 4XN, 4XO, 4XP, 4XQ, 4XR, 4XS, 4XT, 4XU, 4XV, 4XW, 4XX, 4XY, 4XZ, 4YA, 4YB, 4YC, 4YD, 4YE, 4YF, 4YG, 4YH, 4YI, 4YJ, 4YK, 4YL, 4YM, 4YN, 4YO, 4YP, 4YQ, 4YR, 4YS, 4YT, 4YU, 4YV, 4YW, 4YX, 4YY, 4YZ, 4ZA, 4ZB, 4ZC, 4ZD, 4ZE, 4ZF, 4ZG, 4ZH, 4ZI, 4ZJ, 4ZK, 4ZL, 4ZM, 4ZN, 4ZO, 4ZP, 4ZQ, 4ZR, 4ZS, 4ZT, 4ZU, 4ZV, 4ZW, 4ZX, 4ZY, 4ZZ, 4AA, 4AB, 4AC, 4AD, 4AE, 4AF, 4AG, 4AH, 4AI, 4AJ, 4AK, 4AL, 4AM, 4AN, 4AO, 4AP, 4AQ, 4AR, 4AS, 4AT, 4AU, 4AV, 4AW, 4AX, 4AY, 4AZ, 4BA, 4BB, 4BC, 4BD, 4BE, 4BF, 4BG, 4BH, 4BI, 4BJ, 4BK, 4BL, 4BM, 4BN, 4BO, 4BP, 4BQ, 4BR, 4BS, 4BT, 4BU, 4BV, 4BW, 4BX, 4BY, 4BZ, 4CA, 4CB, 4CC, 4CD, 4CE, 4CF, 4CG, 4CH, 4CI, 4CJ, 4CK, 4CL, 4CM, 4CN, 4CO, 4CP, 4CQ, 4CR, 4CS, 4CT, 4CU, 4CV, 4CW, 4CX, 4CY, 4CZ, 4DA, 4DB, 4DC, 4DD, 4DE, 4DF, 4DG, 4DH, 4DI, 4DJ, 4DK, 4DL, 4DM, 4DN, 4DO, 4DP, 4DQ, 4DR, 4DS, 4DT, 4DU, 4DV, 4DW, 4DX, 4DY, 4DZ, 4EA, 4EB, 4EC, 4ED, 4EE, 4EF, 4EG, 4EH, 4EI, 4EJ, 4EK, 4EL, 4EM, 4EN, 4EO, 4EP, 4EQ, 4ER, 4ES, 4ET, 4EU, 4EV, 4EW, 4EX, 4EY, 4EZ, 4FA, 4FB, 4FC, 4FD, 4FE, 4FF, 4FG, 4FH, 4FI, 4FJ, 4FK, 4FL, 4FM, 4FN, 4FO, 4FP, 4FQ, 4FR, 4FS, 4FT, 4FU, 4FV, 4FW, 4FX, 4FY, 4FZ, 4GA, 4GB, 4GC, 4GD, 4GE, 4GF, 4GG, 4GH, 4GI, 4GJ, 4GK, 4GL, 4GM, 4GN, 4GO, 4GP, 4GQ, 4GR, 4GS, 4GT, 4GU, 4GV, 4GW, 4GX, 4GY, 4GZ, 4HA, 4HB, 4HC, 4HD, 4HE, 4HF, 4HG, 4HH, 4HI, 4HJ, 4HK, 4HL, 4HM, 4HN, 4HO, 4HP, 4HQ, 4HR, 4HS, 4HT, 4HU, 4HV, 4HW, 4HX, 4HY, 4HZ, 4IA, 4IB, 4IC, 4ID, 4IE, 4IF, 4IG, 4IH, 4II, 4IJ, 4IK, 4IL, 4IM, 4IN, 4IO, 4IP, 4IQ, 4IR, 4IS, 4IT, 4IU, 4IV, 4IW, 4IX, 4IY, 4IZ, 4JA, 4JB, 4JC, 4JD, 4JE, 4JF, 4JG, 4JH, 4JI, 4JJ, 4JK, 4JL, 4JM, 4JN, 4JO, 4JP, 4JQ, 4JR, 4JS, 4JT, 4JU, 4JV, 4JW, 4JX, 4JY, 4JZ, 4KA, 4KB, 4KC, 4KD, 4KE, 4KF, 4KG, 4KH, 4KI, 4KJ, 4KL, 4KM, 4KN, 4KO, 4KP, 4KQ, 4KR, 4KS, 4KT, 4KU, 4KV, 4KW, 4KX, 4KY, 4KZ, 4LA, 4LB, 4LC, 4LD, 4LE, 4LF, 4LG, 4LH, 4LI, 4LJ, 4LK, 4LL, 4LM, 4LN, 4LO, 4LP, 4LQ, 4LR, 4LS, 4LT, 4LU, 4LV, 4LW, 4LX, 4LY, 4LZ, 4MA, 4MB, 4MC, 4MD, 4ME, 4MF, 4MG, 4MH, 4MI, 4MJ, 4MK, 4ML, 4MN, 4MO, 4MP, 4MQ, 4MR, 4MS, 4MT, 4MU, 4MV, 4MW, 4MX, 4MY, 4MZ, 4NA, 4NB, 4NC, 4ND, 4NE, 4NF, 4NG, 4NH, 4NI, 4NJ, 4NK, 4NL, 4NM, 4NN, 4NO, 4NP, 4NQ, 4NR, 4NS, 4NT, 4NU, 4NV, 4NW, 4NX, 4NY, 4NZ, 4OA, 4OB, 4OC, 4OD, 4OE, 4OF, 4OG, 4OH, 4OI, 4OJ, 4OK, 4OL, 4OM, 4ON, 4OO, 4OP, 4OQ, 4OR, 4OS, 4OT, 4OU, 4OV, 4OW, 4OX, 4OY, 4OZ, 4PA, 4PB, 4PC, 4PD, 4PE, 4PF, 4PG, 4PH, 4PI, 4PJ, 4PK, 4PL, 4PM, 4PN, 4PO, 4PP, 4PQ, 4PR, 4PS, 4PT, 4PU, 4PV, 4PW, 4PX, 4PY, 4PZ, 4QA, 4QB, 4QC, 4QD, 4QE, 4QF, 4QG, 4QH, 4QI, 4QJ, 4QK, 4QL, 4QM, 4QN, 4QO, 4QP, 4QQ, 4QR, 4QS, 4QT, 4QU, 4QV, 4QW, 4QX, 4QY, 4QZ, 4RA, 4RB, 4RC, 4RD, 4RE, 4RF, 4RG, 4RH, 4RI, 4RJ, 4RK, 4RL, 4RM, 4RN, 4RO, 4RP, 4RQ, 4RR, 4RS, 4RT, 4RU, 4RV, 4RW, 4RX, 4RY, 4RZ, 4SA, 4SB, 4SC, 4SD, 4SE, 4SF, 4SG, 4SH, 4SI, 4SJ, 4SK, 4SL, 4SM, 4SN, 4SO, 4SP, 4SQ, 4SR, 4SS, 4ST, 4SU, 4SV, 4SW, 4SX, 4SY, 4SZ, 4TA, 4TB, 4TC, 4TD, 4TE, 4TF, 4TG, 4TH, 4TI, 4TJ, 4TK, 4TL, 4TM, 4TN, 4TO, 4TP, 4TQ, 4TR, 4TS, 4TT, 4TU, 4TV, 4TW, 4TX, 4TY, 4TZ, 4UA, 4UB, 4UC, 4UD, 4UE, 4UF, 4UG, 4UH, 4UI, 4UJ, 4UK, 4UL, 4UM, 4UN, 4UO, 4UP, 4UQ, 4UR, 4US, 4UT, 4UU, 4UV, 4UW, 4UX, 4UY, 4UZ, 4VA, 4VB, 4VC, 4VD, 4VE, 4VF, 4VG, 4VH, 4VI, 4VJ, 4VK, 4VL, 4VM, 4VN, 4VO, 4VP, 4VQ, 4VR, 4VS, 4VT, 4VU, 4VV, 4VW, 4VX, 4VY, 4VZ, 4WA, 4WB, 4WC, 4WD, 4WE, 4WF, 4WG, 4WH, 4WI, 4WJ, 4WK, 4WL, 4WM, 4WN, 4WO, 4WP, 4WQ, 4WR, 4WS, 4WT, 4WU, 4WV, 4WW, 4WX, 4WY, 4WZ, 4XA, 4XB, 4XC, 4XD, 4XE, 4XF, 4XG, 4XH, 4XI, 4XJ, 4XL, 4XM, 4XN, 4XO, 4XP, 4XQ, 4XR, 4XS, 4XT, 4XU, 4XV, 4XW, 4XX, 4XY, 4XZ, 4YA, 4YB, 4YC, 4YD, 4YE, 4YF, 4YG, 4YH, 4YI, 4YJ, 4YK, 4YL, 4YM, 4YN, 4YO, 4YP, 4YQ, 4YR, 4YS, 4YT, 4YU, 4YV, 4YW, 4YX, 4YZ, 4ZA, 4ZB, 4ZC, 4ZD, 4ZE, 4ZF, 4ZG, 4ZH, 4ZI, 4ZJ, 4ZK, 4ZL, 4ZM, 4ZN, 4ZO, 4ZP, 4ZQ, 4ZR, 4ZS, 4ZT, 4ZU, 4ZV, 4ZW, 4ZX, 4ZY, 4ZZ, 4AA, 4AB, 4AC, 4AD, 4AE, 4AF, 4AG, 4AH, 4AI, 4AJ, 4AK, 4AL, 4AM, 4AN, 4AO, 4AP, 4AQ, 4AR, 4AS, 4AT, 4AU, 4AV, 4AW, 4AX, 4AY, 4AZ, 4BA, 4BB, 4BC, 4BD, 4BE, 4BF, 4BG, 4BH, 4BI, 4BJ, 4BK, 4BL, 4BM, 4BN, 4BO, 4BP, 4BQ, 4BR, 4BS, 4BT, 4BU, 4BV, 4BW, 4BX, 4BY, 4BZ, 4CA, 4CB, 4CC, 4CD, 4CE, 4CF, 4CG, 4CH, 4CI, 4CJ, 4CK, 4CL, 4CM, 4CN, 4CO, 4CP, 4CQ, 4CR, 4CS, 4CT, 4CU, 4CV, 4CW, 4CX, 4CY, 4CZ, 4DA, 4DB, 4DC, 4DD, 4DE, 4DF, 4DG, 4DH, 4DI, 4DJ, 4DK, 4DL, 4DM, 4DN, 4DO, 4DP, 4DQ, 4DR, 4DS, 4DT, 4DU, 4DV, 4DW, 4DX, 4DY, 4DZ, 4EA, 4EB, 4EC, 4ED, 4EE, 4EF, 4EG, 4EH, 4EI, 4EJ, 4EK, 4EL, 4EM, 4EN, 4EO, 4EP, 4EQ, 4ER, 4ES, 4ET, 4EU, 4EV, 4EW, 4EX, 4EY, 4EZ, 4FA, 4FB, 4FC, 4FD, 4FE, 4FF, 4FG, 4FH, 4FI, 4FJ, 4FK, 4FL, 4FM, 4FN, 4FO, 4FP, 4FQ, 4FR, 4FS, 4FT, 4FU, 4FV, 4FW, 4FX, 4FY, 4FZ, 4GA, 4GB, 4GC, 4GD, 4GE, 4GF, 4GG, 4GH, 4GI, 4GJ, 4GK, 4GL, 4GM, 4GN, 4GO, 4GP, 4GQ, 4GR, 4GS, 4GT, 4GU, 4GV, 4GW, 4GX, 4GY, 4GZ, 4HA, 4HB, 4HC, 4HD, 4HE, 4HF, 4HG, 4HH, 4HI, 4HJ, 4HK, 4HL, 4HM, 4HN, 4HO, 4HP, 4HQ, 4HR, 4HS, 4HT, 4HU, 4HV, 4HW, 4HX, 4HY, 4HZ, 4IA, 4IB, 4IC, 4ID, 4IE, 4IF, 4IG, 4IH, 4II, 4IJ, 4IK, 4IL, 4IM, 4IN, 4IO, 4IP, 4IQ, 4IR, 4IS, 4IT, 4IU, 4IV, 4IW, 4IX, 4IY, 4IZ, 4JA, 4JB, 4JC, 4JD, 4JE, 4JF, 4JG, 4JH, 4JI, 4JJ, 4JK, 4JL, 4JM, 4JN, 4JO, 4JP, 4JQ, 4JR, 4JS, 4JT, 4JU, 4JV, 4JW, 4JX, 4JY, 4JZ, 4KA, 4KB, 4KC, 4KD, 4KE, 4KF, 4KG, 4KH, 4KI, 4KJ, 4KL, 4KM, 4KN, 4KO, 4KP, 4KQ, 4KR, 4KS, 4KT, 4KU, 4KV, 4KW, 4KX, 4KY, 4KZ, 4LA, 4LB, 4LC, 4LD, 4LE, 4LF, 4LG, 4LH, 4LI, 4LJ, 4LK, 4LL, 4LM, 4LN, 4LO, 4LP, 4LQ, 4LR, 4LS, 4LT, 4LU, 4LV, 4LW, 4LX, 4LY, 4LZ, 4MA, 4MB, 4MC, 4MD, 4ME, 4MF, 4MG, 4MH, 4MI, 4MJ, 4MK, 4ML, 4MN, 4MO, 4MP, 4MQ, 4MR, 4MS, 4MT, 4MU, 4MV, 4MW, 4MX, 4MY, 4MZ, 4NA, 4NB, 4NC, 4ND, 4NE, 4NF, 4NG, 4NH, 4NI, 4NJ, 4NK, 4NL, 4NM, 4NN, 4NO, 4NP, 4NQ, 4NR, 4NS, 4NT, 4NU, 4NV, 4NW, 4NX, 4NY, 4NZ, 4OA, 4OB, 4OC, 4OD, 4OE, 4OF, 4OG, 4OH, 4OI, 4OJ, 4OK, 4OL, 4OM, 4ON, 4OO, 4OP, 4OQ, 4OR, 4OS, 4OT, 4OU, 4OV, 4OW, 4OX, 4OY, 4OZ, 4PA, 4PB, 4PC, 4PD, 4PE, 4PF, 4PG, 4PH, 4PI, 4PJ, 4PK, 4PL, 4PM, 4PN, 4PO, 4PP, 4PQ, 4PR, 4PS, 4PT, 4PU, 4PV, 4PW, 4PX, 4PY, 4PZ, 4QA, 4QB, 4QC, 4QD, 4QE, 4QF, 4QG, 4QH, 4QI, 4QJ, 4QK, 4QL, 4QM, 4QN, 4QO, 4QP, 4QQ, 4QR, 4QS, 4QT, 4QU, 4QV, 4QW, 4QX, 4QY, 4QZ, 4RA, 4RB, 4RC, 4RD, 4RE, 4RF, 4RG, 4RH, 4RI, 4RJ, 4RK, 4RL, 4RM, 4RN, 4RO, 4RP, 4RQ, 4RR, 4RS, 4RT, 4RU, 4RV, 4RW, 4RX, 4RY, 4RZ, 4SA, 4SB, 4SC, 4SD, 4SE, 4SF, 4SG, 4SH, 4SI, 4SJ, 4SK, 4SL, 4SM, 4SN, 4SO, 4SP, 4SQ, 4SR, 4SS, 4ST, 4SU, 4SV, 4SW, 4SX, 4SY, 4SZ, 4TA, 4TB, 4TC, 4TD, 4TE, 4TF, 4TG, 4TH, 4TI, 4TJ, 4TK, 4TL, 4TM, 4TN, 4TO, 4TP, 4TQ, 4TR, 4TS, 4TT, 4TU, 4TV, 4TW, 4TX, 4TY, 4TZ, 4UA, 4UB, 4UC, 4UD, 4UE, 4UF, 4UG, 4UH, 4UI, 4UJ, 4UK, 4UL, 4UM, 4UN, 4UO, 4UP, 4UQ, 4UR, 4US, 4UT, 4UU, 4UV, 4UW, 4UX, 4UY, 4UZ, 4VA, 4VB, 4VC, 4VD, 4VE, 4VF, 4VG, 4VH, 4VI, 4VJ, 4VK, 4VL, 4VM, 4VN, 4VO, 4VP, 4VQ, 4VR, 4VS, 4VT, 4VU, 4VV, 4VW, 4VX, 4VY, 4VZ, 4WA, 4WB, 4WC, 4WD, 4WE, 4WF, 4WG, 4WH, 4WI, 4WJ, 4WK, 4WL, 4WM, 4WN, 4WO, 4WP, 4WQ, 4WR, 4WS, 4WT, 4WU, 4WV, 4WW, 4WX, 4WY, 4WZ, 4XA, 4XB, 4XC, 4XD, 4XE, 4XF, 4XG, 4XH, 4XI, 4XJ, 4XL, 4XM, 4XN, 4XO, 4XP, 4XQ, 4XR, 4XS, 4XT, 4XU, 4XV, 4XW, 4XX, 4XY, 4XZ, 4YA, 4YB, 4YC, 4YD, 4YE, 4YF, 4YG, 4YH, 4YI, 4YJ, 4YK, 4YL, 4YM, 4YN, 4YO, 4YP, 4YQ, 4YR, 4YS, 4YT, 4YU, 4YV, 4YW, 4YX, 4YZ, 4ZA, 4ZB, 4ZC, 4ZD, 4ZE, 4ZF, 4ZG, 4ZH, 4ZI, 4ZJ, 4ZK, 4ZL, 4ZM, 4ZN, 4ZO, 4ZP, 4ZQ, 4ZR, 4ZS, 4ZT, 4ZU, 4ZV, 4ZW, 4ZX, 4ZY, 4ZZ, 4AA, 4AB, 4AC, 4AD, 4AE, 4AF, 4AG, 4AH, 4AI, 4AJ, 4AK, 4AL, 4AM, 4AN, 4AO, 4AP, 4AQ, 4AR, 4AS, 4AT, 4AU, 4AV, 4AW, 4AX, 4AY, 4AZ, 4BA, 4BB, 4BC, 4BD, 4BE, 4BF, 4BG, 4BH, 4BI, 4BJ, 4BK, 4BL, 4BM, 4BN, 4BO, 4BP, 4BQ, 4BR, 4BS, 4BT, 4BU, 4BV, 4BW, 4BX, 4BY, 4BZ, 4CA, 4CB, 4CC, 4CD, 4CE, 4CF, 4CG, 4CH, 4CI, 4CJ, 4CK, 4CL, 4CM, 4CN, 4CO, 4CP, 4CQ, 4CR, 4CS, 4CT, 4CU, 4CV, 4CW, 4CX, 4CY, 4CZ, 4DA, 4DB, 4DC, 4DD, 4DE, 4DF, 4DG, 4DH, 4DI, 4DJ, 4DK, 4DL, 4DM, 4DN, 4DO, 4DP, 4DQ, 4DR, 4DS, 4DT, 4DU, 4DV, 4DW, 4DX, 4DY, 4DZ, 4EA, 4EB, 4EC, 4ED, 4EE, 4EF, 4EG, 4EH, 4EI, 4EJ, 4EK, 4EL, 4EM, 4EN, 4EO, 4EP, 4EQ, 4ER, 4ES, 4ET, 4EU, 4EV, 4EW, 4EX, 4EY,

SOUTH AUSTRALIA

ELIZABETH AMATEUR RADIO CLUB

At the April meeting of the club almost the entire evening was taken up with a discussion on media comments about the W.I.A. This brought forward several suggestions and resulted in a letter being drafted and forwarded to the Divisional Council by the Executive. SFV, our worthy president, was absent interstate and SPE took the chair. SNQ was elected as the club's representative on the W.I.A. Divisional Council.

Congrats to SPE and Sheila on the birth of a daughter; also Australian in the family so far. Congrats also to Clive on being elected to the Divisional Council and to the addition to his work with the local Fire Brigade, this lad has also found time to give technical instruction to some of the chaps preparing for the A.G.C.F. exam; one of whom, Trevor Mell, has already passed his limited exam. More congratulations!

A new call heard in Elizabeth is 5CR, Layton Cardiff, son of 5XL. Layton is rather limited on the air, but he has been able to give a good signal from his 807. He uses a CR100 rx.

John SQL is away from home quite often in the course of his work, but is busily working to get himself going in a big way with an s.b. rig under construction. In the meantime his signal with a QRP rig is surprisingly strong.

IFY still plugging away on c.w., mainly on 30 mc. Takes a keen interest in the progress of SNO's new house, because he's taking over the kitchen when Yulup is gone; one of whom.

All the boys are waiting anxiously for the Field Day results, bit too much to expect to win it three times in a row, but we seem to have come pretty close.

UTM heard on again after recently shifting to Elizabeth Downs. This puts him in a more advanced position and then from the Woomera Club. SE2, SCV and SAG are often heard on 30 c.w. working the DX. SNO won the preliminary trial of the 1981 All Asia Contest; has now attained membership of that august body, the Certificate Hunters' Club, and has also been elected president of the University of Adelaide Radio Club, which club (RCA) has now become affiliated with us, presumably to take advantage of our excellent Bureaux. 5ZSR are still very active on the v.h.f. bands.

True Story. One of our more intrepid Elizabethans probed so deeply into the interior recently that he came upon the hidden City of Atlantis. He was accompanied by a number of many marvels, he suddenly grasped his wife's arm and said, "Look, there's Panny Persons, let me introduce you to him." Said she, in her quivering voice, "No, not him." He said, "I saw Dave King on Tuesday; one comedian a week's enough!"

RIK running 150w. to a three element beam on both phone and c.w. SCS was able to distribute a large quantity of used valves at a recent club meeting. The valves were very fully received and most members took away their share. S2DV has not been heard yet with his new call of SWV, but has now got the cone of silence over the preliminary try-out stage and is very pleased with results. We learn from unreliable sources that S2C spends most of his time in the States, but he has built himself a filter type s.b. rig and is getting out remarkably, using a 4X150A linear and a ground plane.

Our s.w.l. members, Peter and Roger, are getting more than their share of inward DX cards. Jim Mackensen is busy studying for his ticket. EZMA has repaired a small Italian-made radio, presently in the shop. As soon as a 240/110v. transformer becomes available, this rx will be available for club use, or for sale, or for loan. It has not yet been heard recently of SRA or SKD.

Hugo S2DA has now passed his full ticket and will shortly be on the DX bands. SBC has been heard on sideband with his HTT, but is another one having trouble with the antenna. SNO will probably be closing down soon for a long time, because of shifting to a new QTH in Gawler. TZ, SNO.

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146a Cotham Road, Kew, Vic. WY 3777

TASMANIA

Election for Council officers was held during April and the following appointments were made: President, Tom TAYLOR, Vice-Presidents, Les TLE and Snowy TCH; Secretary, Ken TKA; Treasurer, Snowy TCH; Bulletin Editor, Ken TKA and Snowy TCH; Bulletin Distribution Committee, Tom TAYLOR and Terry TCT; Bulletin Technical Editor, Alan TMY. Council feels, as a result of the above appointments, that the work will be much more equitably spread and that the overworked Secretary might have a little time to come on the air. We hope to hear from there soon.

Ted TLE, our Federal Councillor, has just returned from the Federal Convention in Perth where he represented us through 48 hours of discussion and voting. He was delighted that so much of our contribution met with success and our thanks are due to Ted for representing us so ably.

My apologies to Ken TAYLOR for not knowing he was on s.b. since 1982; blame skip please Ken. While on the subject of s.b.s, George TXL has been heard putting out a beautiful s.b. signal and it should soon be heard on 60 mc s.b.s. TCK will not be heard on the air for some months from now, because Policy was left at his friends' house. I have heard entirely all points east and west from VKT. Look out for Polay from overseas stations. I was delighted to work a G on 7 Mc. early in April on c.w. of course.

We were privileged to be addressed by Professor Ellis, of the University, at our May Divisional meeting on the subject of Radio Astronomy. This address was another example in action lecture, as he described present experiments in this field under way in Tasmania. His delight in the progress of his researches in the field of radio astronomy was evident during the next couple of years augurs bad for DX operation on our bands. Many good questions were asked of the Professor and his answers were most informative. The April Divisional meeting was very interested in a transistorised grid dip oscillator presented by Brian TZE, TZ.

NORTHERN ZONE

Northern Zone members "went bush" on the night of Friday, 17th, however let us hasten to state that the only one to attend the April meeting of the zone which, on this occasion, was being held at the home of our President, was the President himself. In spite of a 66-mile round trip the meeting was one of the best attended meetings held by the zone for a long time. Brian Forster, member and I have since heard that the Forster family had the alternative of going to bed or sitting on the floor for the evening. (As the meeting concluded about midnight, they probably ended up doing both anyway.)

This was the first meeting of the year under the control of our new office-bearers and both our new President and Secretary impressed all those attending by their efficiency and by the amount of work that they have already put into projects and plans for the welfare of the zone whilst under their control. Lecture for the evening was the playing of a tape recording by Ed Tilton, WIDQD, on v.h.f. and this was one of the best and most informative lectures ever heard by the zone.

The following day 20 members of the W.I.A. and I.R.E. were shown over the Postmans hydro-electric scheme at Postmans. A party of the tour being a visit into the giant underground power station now in course of construction. This entailed a half mile trip by diesel bus, where the power house excavated 350 feet long, 50 feet wide, 90 feet high and 500 feet underground, which will eventually house a 100,000 kw. generating plant, which m.v. doesn't stand for mill-volts either!

Interstate visitor to the zone this month was Morton JANG. TPF has been sent advised by WISAL that he is about to leave for the Ozcar and if members are requiring information on this project, they should look for Peter on 7 Mc. TZ, TLE.

NORTH WEST ZONE

During the month had the pleasure of a visit by Morton JANG for a day and we were fortunate in being able to see him. The Northern Zone boys on an inspection tour of the new hydro-power project at Postmans. We are grateful to John TFF in his role of guide. I believe Morton is convinced that we don't do things by halves in VKT.

Have an uncomfortable feeling that TMR has succumbed to the t.v. bacteria. Have not heard him around us for some time. I hope that one of our QRM problems is solved. How long can I resist this dreadful thing? With the opening of Northern Channel, a new wave of interest in our zone and we will be playing a losing

battle. Even if you are in the rake-off chaps, don't forget the institute altogether.

Heard some calls on 72W and 20 mc. Did not know that you were on DX Athol; good show. I was fortunate to be in Harold's (TMZ) zone QSO from this zone. Has now migrated to Southern Zone. Reg TRL was working portable from Cradle Mountain the other day. I could not hear you Reg, but hope that you made some contacts.

Have just returned from the social meeting of the zone. About 12 members were present and it does not give me much to say that those QSO from this zone. Has now migrated to Southern Zone. Reg TRL was working portable from Cradle Mountain the other day. I could not hear you Reg, but hope that you made some contacts.

Well having given l.v., the greatest enemy of this organisation, my usual base session, I will now wish you all good evening, please a break and hope to have more next month. TZ, TMY.

HAMADS

Minimum 5/-, for thirty words.

Extra words, 2d. each.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received at P.O. Box 86, East Melbourne, C.S. Vic., by 8th of the month, and remittance should accompany the advertisement. Call signs are now permitted in Hamads. Dealers' advertisements not accepted in this column.

CLEANING OUT: Small power supply units, 240v. a.c. input, 250v/50 mA. out, 6.3v., £1 each. Some Meters, 0-10 to 0-200 mA., round, 10/- to 30/- each. Power Transformers, 10/- each, some ex 122 Sets. Command V.I.O., dismantled, 3-4.5 Mc., complete and with spares, £1/10/- Two Walkie-Talkie Units, need small repairs, £1 each. One 12-18v. Unit Generator, and filtered supply unit, 300v/100 mA. output, £2. Vibrator Unit, 6v. to 100v./30 mA., 10/- Class C Wavemeter, complete with power supply. Philips Communications Receiver, perfect order, £17/10/- All the above in good order. Please add postage. VK4SS, 35 Whynot St, West End, Brisbane. Phone 4-6526.

FOR SALE: Gear ex late VK5MD. Type 3 Mk. II, complete with modulator, 2.35. Class C Wavemeter, £7/10/- Agchick Heathkit Xmt. (TX1), 10v., £140, in excellent order. Hammarlund HQ145 Rcvr., 110v., £140, in excellent order. Power Transformer, 240/110v. £8. Or reasonable offers will be considered. C. H. Basey, VK5BZ, 12 Seafield Ave., Kingswood, S.A. Ph. 7-4161.

FOR SALE: Power Transformers—400v. aside, 250 mA., £3; 1,400v. aside, 400 mA., £6. Chokes—10H., 400 mA., £2; 10H., 250 mA., £1. Condensers—100 pF., 2,000v., 10c. Meter—1 mA., f.s.d., 60° diam., £2. VK3AIW, L. Weller, 46 Pepperell Ave., Sydnal, Vic.

S.S.B. Sell KWM1 Transceiver, show-room condition. 23 Surrey Road, Keswick, S.A.

WANTED: 3 to 6 Mc. Command Receiver, good condition (adapted or original condition), suitable for s.w.l. for crystal controlled converters. Craig Cook, 10 Foch St, Ormond, Vic. Phone 58-1773.

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FT 3536 DC 3562	DC 8400 = 50.4 Mc.	DC 8017 DC 8023.5 DC 8030.5
DC 3537 FT 3564	DC 8416 = 50.5 Mc.	DC 8017.5 DC 8024 DC 8031
FT 3534 FT 3573	DC 8430 = 50.7 Mc.	DC 8018 DC 8024.5 DC 8031.5
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FT 3549 FT 3580	DC 8500 = 51 Mc.	DC 8019 DC 8025.5 DC 8032.5
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